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TRAVEL : FICTION

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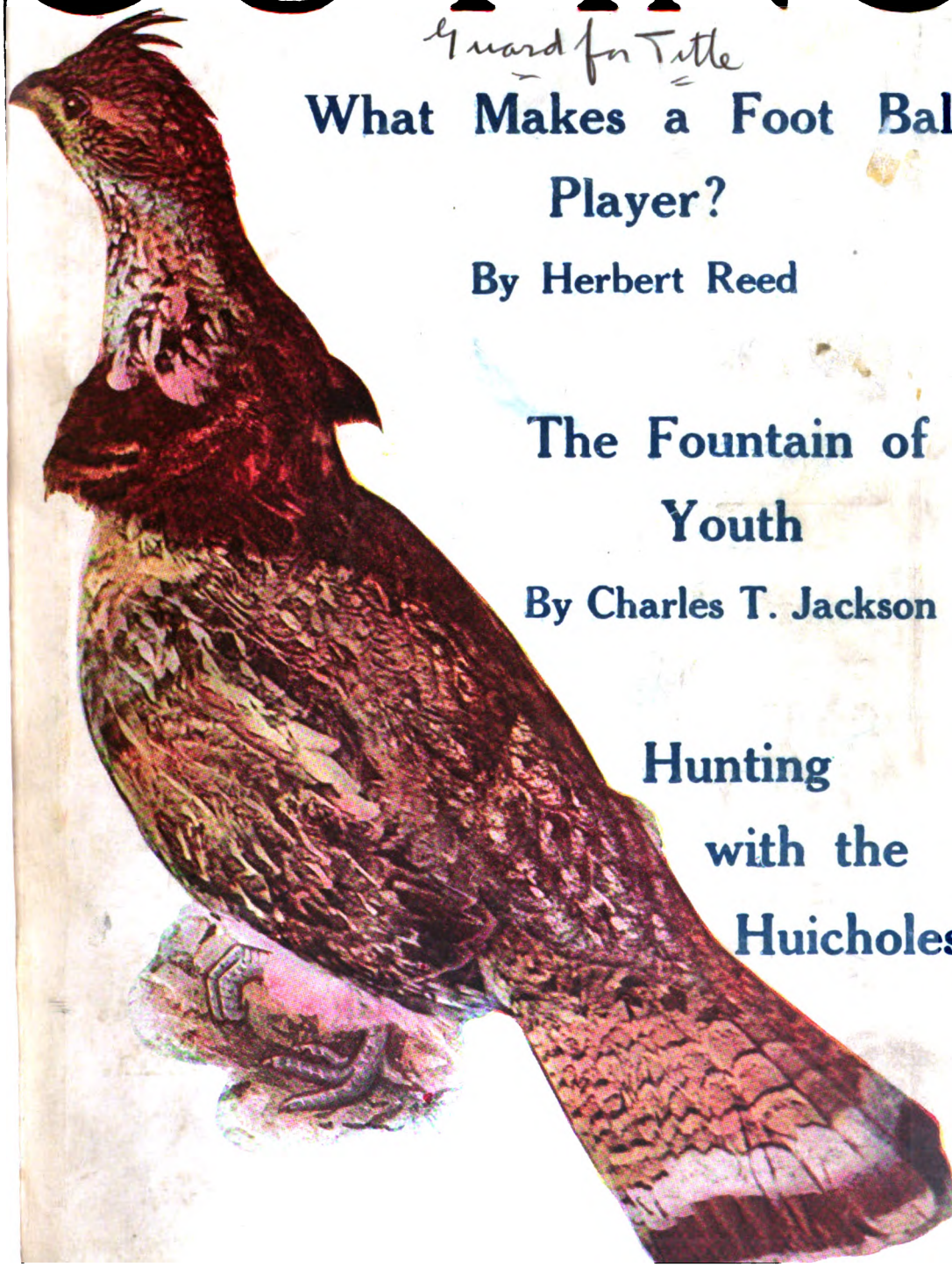

What Makes a Foot Ball Player?

By Herbert Reed

The Fountain of Youth

By Charles T. Jackson

Hunting with the Huicholes

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AROUND CAPE HORN

By FELIX RIESENBERG

A dull gray sky at end of day, a blood red sun at morn,
Signs of wrath in the stormy path of the waters round the Horn.
The pumping of a falling glass, a cloud rack hurrying low,
And the shrill pipe of the mollyhawk warned us of the southern blow.
Cold Staten Land loomed close aboard; with tops'ls shaken free,
We ratched our ship from the rockbound coast that threatened on our lee.
Our tops'ls spread soon split to shreds before the rising gale,
And hove to wind we drifted off, our yards bereft of sail.
Driven before the hungry seas that rushed us night and day,
Nor paused to lick the dripping oil we fed them on their way,
For twenty storm-swept ocean leagues, the sleety ice bred blast
Haled us to south of Ramirez; we rounded it at last.
The westerly gale that veered to south, a head wind off the Horn,
Was a fair breeze round Ramirez, as we hauled to the north that morn,
We bent our tops'ls, squared away, set ev'ry kite on high,
And raced our ship to a warmer sea where the flying fishes fly.

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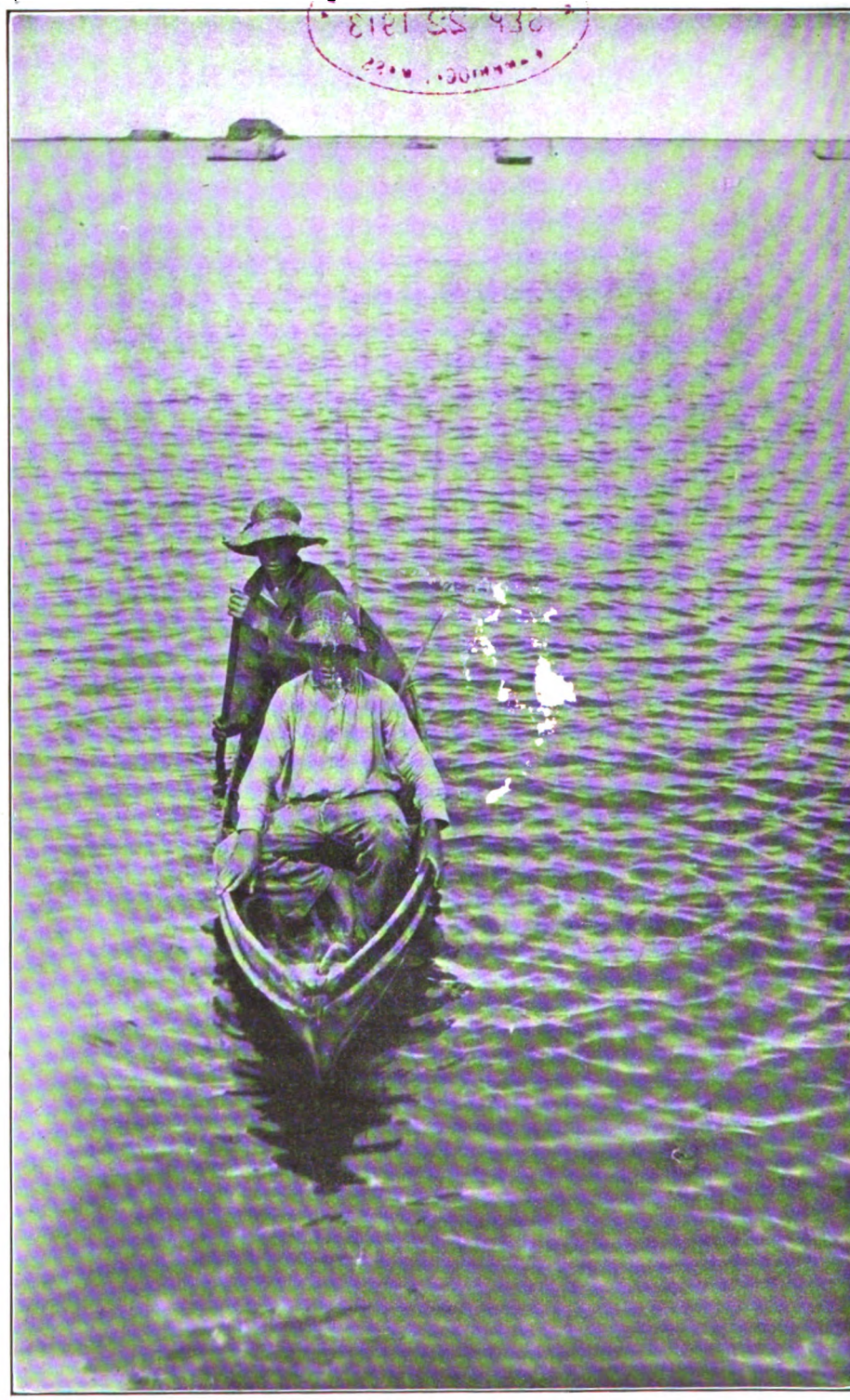

TWO TURTLE HUNTERS PADDLED TO OUR CAMP

Illustration for "The Fountain of Youth," page 26.

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OUTING

OCTOBER
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SPORT TRAVEL FICTION ADVENTURE

VOL. LXIII No. 1

WHAT MAKES A FOOTBALL PLAYER?

By HERBERT REED

ILLUSTRATED WITH PHOTOGRAPHS

"SEVENTY-FIVE per cent of football skill is from the neck up," says a well-known writer on sport. It's a game of brains and courage—not of mere brute strength. Study the men who are described in the following pages, observe the qualities that lifted them above the crowd. See how much the qualities that we call moral counted in them. Then try to think of any game better adapted to develop the traits that good Americans want to find in their sons.

FOOTBALL fiction—both good and bad—has familiarized us with the coach who stalks about the campus when college opens, and, spotting a youth with a chest like a barrel, a back like a board fence, and legs like trunks of trees, says to that youth: "Here, you, what are you doing loafing around the campus? Get into a suit and come down to the football field this afternoon." I do not pretend that such a coach is purely a figment of fiction, nor yet that even the best of coaches do not look over the men who are hurrying to their classes, but it is cold fact that the giant who walks the campus is too often a disappointment once the coach looks into his face.

The truth is that sheer physique is having less and less to do with football, and that it has had less to do with it in the past than most of us have been led to believe. Successful football has been built upon brains and courage. If the physique is at hand, so much the better—but the corner-stones remain. Brains and courage make a football player, and brains and courage make a football team.

Now, by courage I do not mean mere pluck, nerve—call it what you will—but that deeper quality that must be apparent off the field as well as on; the quality that rejoices in sacrifice when sacrifice is necessary; that makes it possible for the player to give always just a little more of himself than anyone had a right to expect. Courage and brains seize the psychological moment that appears at one time or another in every big

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WEEKES, COLUMBIA
Star of the deadly hurdle play

TOM THORP, COLUMBIA
Who beat Cornell with a broken collar bone

CHADWICK, YALE
One of the headiest runners in the game

game. They are both aggressive and defensive. They carry the fight to the enemy. And at the same time they make possible those magnificent stands in the last ditch which no season in the history of the game has failed to produce.

There is no combating the statement that the "good big man is better than the good little man," but in every case wherein the "good big man" has made one of those tremendous reputations that belong to a Heffelfinger, a Coy, a Glass, a Hare, a Shevlin, a Bomeisler, a Cutts, a Blagden, or to any of the men who have boasted of tremendous physique, that physique has been topped with both brains and courage. Indeed, in football, brains are inseparable from courage, for the mere playing of the game in an aimless, blind fury has never produced high-class football.

Now, as a rule, the stars of the gridiron, the men of massive physique, are so conspicuous that their brains and their courage are apparent at once to every man in the stands, whereas the light of the man who has no such physique, and who is playing almost entirely on his brains and courage, is hidden under a large-sized bushel. Of sheer strength such men have little or none, and they conquer through the power of an indomitable will.

Perhaps the finest sample of such a man, save that no one could fail to see that he was a star, was Frank Hinkey, of Yale, the great end of years ago. Hinkey was pale of face, with a mop of black hair, slight of figure—even actually fragile in appearance. Yet this man tore to pieces some of the most powerful interference the game has ever seen. The "silent man," the "shadow end," they called him. The late Gordon Brown, I think it was, who said, "Hinkey was simply an embodied flame." That definition I like better. It is closer to the real core of this wonderful player. Critics and other football men without end have tried to analyze Hinkey's play, to explain his marvelous success, and have failed. Their mistake was in looking for something like the familiar technique instead of searching out the character of the man.

This great Yale end had an uncanny way of weaving his way through the interference to the runner. The start of a

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POE, PRINCETON
Who won in '99 on sheer courage

M'CORMICK, PRINCETON
Whose thin skin made football a torture

STARBUCK, CORNELL
With strength and courage to buck standing up

play toward his end found Hinkey stooped and practically motionless, his eyes apparently on the ground. One might have thought that he was studying shadows, instead of the great engine of offense soon to meet him. Just a little shifting, then a sudden, sinuous glide, the interference broke apart and down came the runner—usually for a loss. There was no apparent expenditure of strength, but there was palpable evidence of brains at their best. It was uncanny.

Despite his fragile appearance this small man appeared to be practically "unbreakable," and it was not until the Yale-Princeton game of 1893 that the famous Yale man was seriously injured in a game. Blake was playing fullback for Princeton. Butterworth hoisted a short kick from well down in his own territory, and Blake, himself a fine type of the courageous football player, came in on the ball, risking everything in the hope of making a clean catch, or at the worst a pick-up, one of the hardest feats in football. Hinkey was down under the drive, and he and Blake came together in one of the worst head-on crashes ever seen on a football field. In the end, Hinkey had to be led from the field. He was no longer able to think, but his indomitable courage was still at work and he was led to the side lines fighting all the way.

There was on the Cornell eleven of 1901 a halfback built much on the type of Hinkey. Henry Purcell, one of the best backs Cornell ever had, weighed about 145 pounds, had little or no strength, and was subject to injury. But he had brains and courage. He had an uncanny way of divining the exact moment the ball was to be snapped, and his specialty being quick dashes between tackle and guard, his wonderful starting brought him up to the opening before the defense was awake. When he entered the Pennsylvania game Purcell had two shoulder blades so sadly out of shape that when once thrown he could not use his hands in getting up off the ground. Both legs also were on the hospital list, so that this plucky halfback could not rise without assistance.

Yet at one stage of the game Purcell carried the ball seven consecutive times for a total of forty-five yards. After each down other members of the team

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MORLEY, COLUMBIA
One of the stars of a nervy backfield

FRANK BUTTERWORTH, YALE
An "old-timer" who was a glutton for work

GORDON BROWN, YALE
A fighting leader with grim courage

lifted him to his feet, and he was sent slicing into the line again for another good gain. And this man, who had none of the attributes popularly supposed to be those of a football player, used to say that no halfback should ever fail to gain at least three yards at any time. Now it would be a mistake to call such an exhibition a mere show of pluck. It was the courage that gave him absolute faith in himself. So long as he could run he could gain, and no one knew it better than he. It may be as well to record here that his injuries were not of a permanent nature.

The name of Morris Ely will never be forgotten at Yale, I think. Here was a man none too well equipped physically, who fought doggedly on the second eleven—yes, and cheerfully—for nearly four years before he earned his "Y." Ely was not brilliant, but he was reliable and he had a determination that was not to be matched by any member of the first eleven. It was not until the Harvard-Yale game at New Haven in 1898, when facing the great Crimson machine captained by Ben Dibblee, that Ely got his real chance.

Playing against heavy odds, in a driving rain, but at all times the efficient quarterback, Ely showed the stuff of which he was made by sticking to the fight long after he had had two ribs broken. Almost every minute of the second half Ely was suffering excruciating pain, yet he kept driving his team to such effect that it was playing better football at the close than at the start, and he himself contributed the most brilliant run of the day, even if that run was practically useless. The Harvard quarterback that day was Charlie Daly, one of the most brilliant the game has seen, yet there were many moments, even after his injury, when Ely was thoroughly in Daly's class.

Harold H. Weekes, of Columbia, probably will best be remembered as a wonderful end runner, and in his case there was plenty of physical equipment for the game; but in spite of his spectacular circling of the ends Weekes was called upon to stand pounding of a nature more trying than in the case of any other back in recent years. George Foster Sanford was the man who taught the husky Columbia eleven one of the deadliest of maneuvers—the hurdle play—this genius of the gridiron ever devised.

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Weekes was called upon to leap on the backs of his forwards and ride over the line with all the power of this massive eleven behind him.

When he fell, he fell far and hard, and if stopped in midcareer the impact was terrific. Yet in all his football career there was never the slightest sign of flinching on the part of the great Columbia back, even though sprinters are prone to that sort of thing. With Morley and Dick Smith behind the line working with Weekes, Columbia had one of the most courageous backfields I have ever seen.

There was another Columbia man who showed a quiet courage that never got him featured as a star, but was none the less appreciated by those who go deeper than the surface, and that was Orleans Longacre, a big, husky chap, but a man with an unfortunate tendency to injuries. The other forwards of the Columbia team were featured in the reports of the games for extremely brilliant work, but the chroniclers of those days forgot to mention that Longacre was a little more than holding his own while playing with one hand, the other being so badly injured as to be of no use to him. Longacre began his football career as a plodder, who, although well set up, depended on his courage and brains, and although he developed wonderfully he never got the credit that was due him.

But perhaps Columbia's most courageous player, and, indeed, one of the most courageous on any field, was Tom Thorp, the big tackle, now coaching at Fordham. Thorp was a born football man, sometimes, perhaps, a little too aggressive for the good of his team, but he had brains, knew how to use them, and it was inevitable that he would develop into a star. He was conspicuous enough even when playing on one of Columbia's good teams, but when Morningside football began to deteriorate Thorp was practically a team in himself. Twice he beat Cornell almost single-handed, and in one of these games he played with a broken collar bone and a useless arm. None knew it until after the game, and although the big tackle was suffering tortures he continually ran with the ball and continually gained the valuable ground that resulted in victory in the end.

Quite another type of courage, and that of the highest sort, was that dis-

HINKEY, YALE
The greatest of them all in nerve and brains

HUDSON, CARLISLE
Who drop-kicked goals from a touchdown

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COONEY, PRINCETON

Whose nerve and judgment beat one of Cornell's best teams

played by the late Francis H. Burr, the Harvard captain of 1908. Under Captain Parker in 1907 Harvard football was at a low ebb. Uninspiring leadership and inefficient coaching had had their effect, and when the eleven took the field against Yale that year the Harvard undergraduates were hopeful of nothing more than a good showing. Yale came up to the game with a good record, while Harvard's season had been one of the poorest in years. Yet there were good players on the team, notably Hoar, Grant, Newhall, Starr, Wendell and Burr. There was, indeed, material for a first-class eleven.

PISHON, DARTMOUTH

One of the smallest and fastest of backfield men in recent years

Now, while the team was grateful for the hearty support of the undergraduates, it felt that merely to make a good showing was an unworthy achievement.

A new spirit had come over the Crimson. The best men of the squad and other influential Harvard men felt that the time had come to reorganize football and put it on such a basis that merely to be beaten at all was far from a "good showing." Thus when Yale outplayed the Crimson rather easily, though none too fresh after an unusually hard Princeton game, the feeling in the team approached bitterness, and there arose a determination that that should be the last year in which Harvard should be outclassed. To that end the team refused to be congratulated on the "showing" after the game, and Francis Burr was elected captain, as being the leader who would fit in with a new order of things.

Percy D. Haughton, the splendid kicker of the '98 eleven, a man with a genius for coaching, and a born organizer, was engaged to handle football at Cambridge, and with the new coach at the helm Burr set out to build up a team that should take the sting out of the disastrous defeat of the year before. Burr was a young man of splendid personality, of brains and courage, and he set his heart upon leading his team to a victory over the Blue, and that, too, on Yale Field. It was not long, however, before the Harvard captain suffered an injury that put him out of the play, and there was much speculation at Cambridge as to whether he could possibly be patched up in time for the Yale game.

By the day of the 1908 game, the Crimson was not wholly out of it, but the decision lay with Burr himself, and right here he showed the stuff of which he was made. Muffling himself in a big crimson blanket, he lay on the sideline, sent a substitute in his place, and remained a spectator throughout the game rather than risk defeat to the team through any possible flaw in his own play. The story of Kennard's field goal that won that game is familiar to any follower of football, but a man lay stretched on the sideline that day who had fought as good a fight as any player on the field.

At one time or another almost every college or university has had a team that has made a famous stand in the last ditch. Yale, Princeton and Pennsylvania have been noted for it. The most salient case of an individual stand that comes to mind, however, is that of Johnny Field under the shadow of his own goal in the Harvard-Yale game of

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1910, when his tackle of Corbett, the Harvard halfback, undoubtedly saved the game for the Blue. Throughout this game the Yale backs, Field, Daly and Kistler, faced one of the most powerful attacks that Harvard had ever shown, and so cleverly conceived and executed were the Crimson plays that in nearly every instance the Harvard backs came clear through to the Yale secondary defense without having been more than tagged.

CUTTS, HARVARD
A tackle who brought courage and brains to his task

There was nothing for the Yale backs to do but come up fast and meet their opponents right on the line of scrimmage, which is the hardest sort of tackling in which a man can indulge, and which severely tests his native courage. In this trying defensive work Field was the leader, although Fred Daly, the captain, outdid himself that day. Again and again the powerful Wendell, the man with the massive shoulders and the terrific straight drive when he met the tackler, carried the ball.

NEIL SNOW, MICH.
A famous end who is now an official

There were other splendid backs behind the Harvard line, notably the long-striding Corbett, Campbell, Leslie, and Morrison. But it was Wendell who bore the burden of the heavy assault. The first terrific drive on the Yale defenses was stopped by a penalty, the second by the unaided effort of Johnny Field. Wendell had carried the ball inside the fifteen-yard line, making first down after first down. At last Corbett was called into action, to relieve Wendell, so that the latter might be used to deliver the final punch. Had Corbett made his distance on that single dash he was called upon to make, and Wendell again taken up the attack, there might have been a different story to tell. But just as Corbett reached the line of scrimmage a miniature avalanche of blue and gray struck him. It was Field. It has been said of that crash that Corbett was tackled from the soles of his feet to the crown of his head.

All that was Johnny Field—physically and mentally—hit the Harvard halfback, and the latter dropped the ball. The Harvard assault had been checked and the game was saved for Yale.

Courage and brains have come in football parcels weighing all the way from the 125 pounds of Wurtemburg, the old Yale quarter, and Pishon, of Dartmouth, one of the smallest and fastest backfield men of recent years, to the 240 pounds of Horr, of Syracuse, who, in spite of his bulk, made a specialty of making and intercepting forward passes. Indeed, in the latter direction his skill and activity were almost uncanny. Gordon Brown, one of the greatest leaders Yale ever had, had football courage of the grim order. His work was less conspicuous than that of such guards, for instance, as T. T. Hare, of Pennsylvania, or Glass, of Yale, but he practically "paced" one of the most powerful offensive machines ever seen on the field.

McCormick, Princeton's great fullback—a splendid kicker and line breaker—had need of all the courage a football player could possess. The torture of boils is usually reserved for crew men, but so tender was McCormick's skin that training seemed to have the same

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effect on him that it has on many oarsmen. Despite all that the trainer could do, McCormick frequently had to go into an important game prepared to grin and bear it every time he bumped into one of his foes, and as he was frequently called upon to carry the ball, and to be the keystone of the interference, these bumps were frequent.

Frank S. Butterworth, the Yale fullback of the early nineties, will never be forgotten by the older followers of the game who used to make the pilgrimage to Springfield for the Harvard-Yale game. Now, although Butterworth was well set up, he never gave the impression of great power, nor of being able to stand the heavy work that was put upon him, for not only was he called upon to kick and to catch kicks, but to do practically all of the line-breaking. Butterworth used to go into the line almost straight up and down, hitting it with his hips, much like Starbuck, of Cornell, who was a man of much the same type, albeit of huskier build. There was never a "brainier" run made on any field than that by Butterworth on a caught kick in the Yale-Princeton game of 1893, when he swung around three good tacklers by as pretty an exhibition of "straight-arm" work as one would care to see. There was no department of backfield work in which Butterworth was not proficient, and because of his natural courage he was allowed to do far more than a reasonable share of the work, both on attack and defense.

HARE, PENN.
A guard who was one of the most conspicuous of his time

Chadwick, the Yale halfback, was one of the headiest runners in the game, and bears the distinction of scoring twice from almost midfield in the same big game, and on plunges straight into the line. It is true that he had good openings, but his cleverness in avoiding the secondary defense has seldom been equaled. There was nothing particularly impressive about Chadwick, but he had an eerie way of finding openings and of breaking the tackles of some of the biggest and most powerful forwards.

ECKERSALL, CHICAGO
One of the best examples from the West

Jim Cooney, of Princeton, was one of those players whose courage was written large across his countenance. One look at Cooney and you knew the man. Cooney's brains and the courage of his conviction went far toward defeating one of the best teams Cornell ever turned out. The game was played at the Polo Grounds in New York, in the first year of the forward pass, when the experts were not quite sure just how the new rules would work out. Cornell had a bewildering tackle play that swept them over the line for a touchdown in short order. Many of the best gains were made through Cooney, but the sturdy

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Princetonian, beaten back though he was, diagnosed that play, and after the touchdown he had a defense for it. This consisted in playing very wide and taking his guard out with him a distance that would have shocked the coaches. It was taking chances with a vengeance, but Cooney was right, and he clung to his plan to such purpose that one of the most effective assaults disclosed under the new rules was stopped, and Princeton won the game. At another time Cooney fought, through an entire Yale game, what amounted to a duel with Jim Hogan, although only two or three days before, because of injuries, he could not bend over.

With the courage of Arthur Poe, one of the smallest men who ever played the game, every follower of football is familiar. It was Poe whose field goal, with only seconds left to play, won for Princeton the game against Yale in 1899, and by the score of 11 to 10. Poe had no reputation as a drop kicker, and it was nothing but courage that fitted him to do the unfamiliar thing in a case of desperate need.

DALY, HARVARD
One of the most brilliant quarters the game has seen

Perhaps the surest drop kicker of them all was little Hudson, the Carlisle Indian. So cool and brainy was this small player that instead of place-kicking for goal after a touchdown, the Indian used the drop-kick with never-failing success. It was he who forced the change in the rules that bars the drop-kick after a touchdown.

Neil Snow, Michigan's famous end, and now a clever official; Cutts, the great Harvard tackle; Sprackling of Brown, and Eckersall of Chicago, were all men conspicuous for the combination of courage and brains that makes a football player.

SPRACKLING, BROWN
A born leader with perfect confidence in himself

In the case of Sprackling there was no rule of football generalship as it is understood to-day that he did not dare violate, so sure was he of himself. A team led by Sprackling reflected his own confidence, and coaches both at Yale and Harvard heaved genuine sighs of relief when this born leader finished his college course. Sprackling was one of the few men who found it absolutely safe to make the forward pass clear down in front of his own goal.

And so the list might well be carried into the hundreds. In every case it will be found that whether a man weighed 125 or 240 pounds he triumphed after all through his courage and his brains, and so it will be in the future, unless the game degenerates mightily. There are no signs of it at present. The two great corner-stones of the game would seem to the unprejudiced observer to be rather worth while as assets after graduation. And football is still young.

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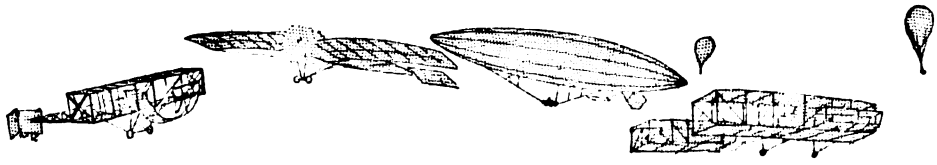

THE CONQUEST OF THE AIR

By WALTER PRICHARD EATON

DRAWING BY WALTER KING STONE AND PHILLIPPS WARD

DOUBTLESS there were aviators before Icarus, and certainly man has sought to conquer the air ever since. It is a racial instinct. Like all racial instincts, it finds its crude expression in boyhood. No less surely was a box kite the first aeroplane than was the joy of kite flying the first expression in the aeroplane inventor of the instinct which led him to his final achievement. The boy wants to get up in the air, to romanticize his method of locomotion, so he builds himself a pair of stilts. He wants to see something else go still higher than he can, so he flies a kite. The urge of aviation is in his soul.

I sometimes wonder, however, if the final achievement of the 20th Century in the conquest of the air has not made the impossible commonplace and killed romance. I wonder because I never see boys on stilts any more and almost never see them flying kites. When I was a boy our school reader had a picture of a Scotch shepherd (I think he was Scotch) mounted on long stilts and seated upon a still longer pole with a top like a stool. He was, I recall, nonchalantly knitting. This picture fired us with emulation. We made long stilts and fastened them with skate straps to our knees and ankles. They were very hard on the stockings, and sometimes on the skin. Once harnessed, we crawled to the nearest tree and with its aid mounted to our feet. Then with joyous cries, we bestrode the neighborhood until our aching legs could stand the straps no longer. The sensation of being elevated four feet above the normal was indeed thrilling. One pair I had were five feet from ground to foot-rest, and on them I carried a basket of eggs safely for a mile. Theoretically, we could take much longer steps so mounted. Actually, no doubt, the effort of walking was doubled. But what cared we? We were nine feet tall, and looked down with scorn upon our fellows. Ours was the kingdom of the air! For the kind of stilts that came up to the armpits and required holding we had only contempt. Upon them one was not a free agent.

And upon the October wind we flew our kites. Many a newspaper went into the construction of the tails, with a red bandanna always streaming at the end. We saved our pennies for reels of real linen line, and a boy's standing was reckoned by the length of his kite string. We didn't merely run across the lawn, flapping a weak-ribbed bit of Japanese paper behind us. We went up on Bare Hill with kites which stood five feet high and sent them up until they were specks and almost pulled us off our feet. Once, indeed, I was pulled quite off mine, and sailed fifty yards with my boots dangling face high above the ground, till a companion grabbed me by the heels. I wouldn't have let go if I'd been carried fifty feet aloft!

I've never experienced any sensation so delightful since.

We were not solving any problems of aviation then, but we were experiencing its romance. Now the problems have been solved, and every boy is familiar with aeroplanes. But where is the romance? Where are the stilts and kites of yesteryear? After all, the greatest man is not he who solves a problem, but he who invents one!

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'I CARRIED A BASKET OF EGGS SAFELY FOR A MILE.'

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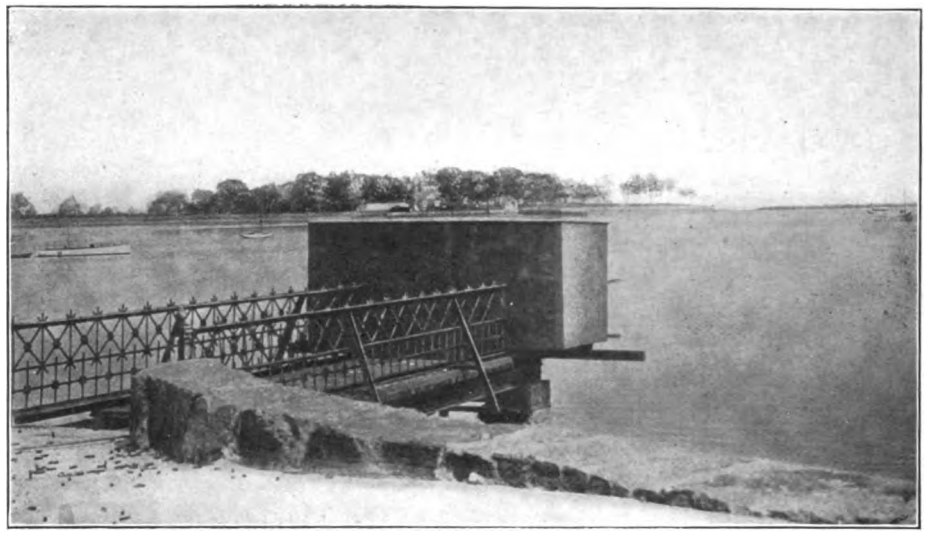
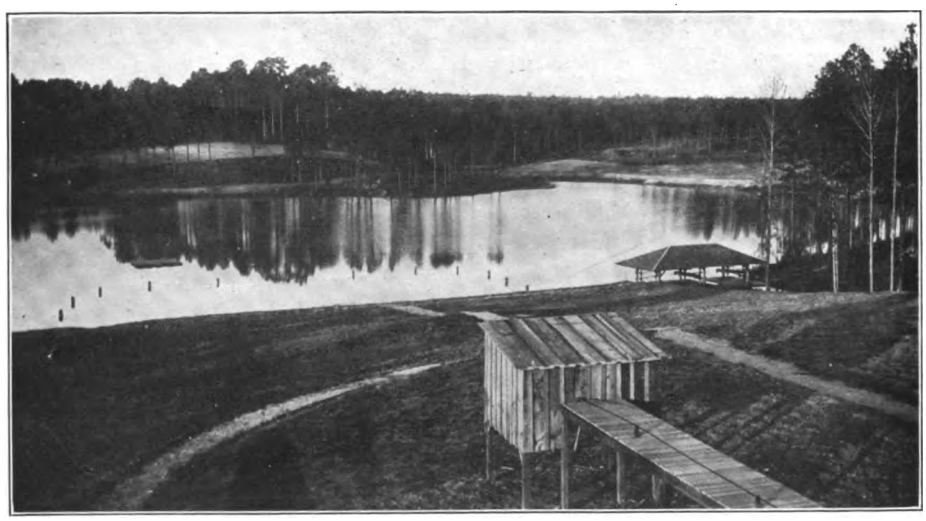


AT THE LARCHMONT YACHT CLUB A SPECIAL PIER HAS BEEN BUILT FOR THE TRAP-SHOOTERS

TRAP-SHOOTING OVER WATER

GUN clubs that are hampered by lack of ground space need not despair. The clay pigeon flies over water as well as over land. In fact, there is a special advantage in that a better skyline and background are secured for the shooters. Even in the case of the Southern club shown below the low trees across the pond do not affect the vision as the birds are thrown high enough to give a sharp relief against the sky. By this plan practically the only ground necessary is to give room for some sort of a clubhouse and for the traps and shooters' stand.



THE BROOKHAVEN GUN CLUB, NEAR ATLANTA, THROWS THE BIRDS OVER THE WATER OF A SMALL POND

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MAKING A GAME REFUGE

By HENRY JAY CASE

ILLUSTRATED WITH PHOTOGRAPHS BY NORMAN MCCLINTOCK

THIS is the story of what two men have done toward solving the problem of game protection in this country. Incidentally they have shown one of the uses to which waste land can be put. The game is willing to do its share, as these men have shown. The local citizens can easily be educated to a proper appreciation of the work. The land is waiting. There remains but to bring the factors together, as these two men have done.

WHEN two business men from New York City, not long ago, purchased three thousand acres of scrub timber in the Litchfield Hills, Connecticut, for a game refuge, natives in passing winked one eye and slyly tapped their foreheads. The fact that two more "city fellers" had been separated from real money in return for abandoned farm and timber land appealed more to them than the motives behind the purchase. Frankly, game refuges didn't interest them. They couldn't understand how any sane person could go to the expense of raising birds merely to free them as soon as they could fly. The people of the Hills were too busy making a living to see twenty-five dollars a pair in wood ducks' nests that failed to return at least four per cent on the investment, or to get nothing back but a nature lover's thrill when a fifty-dollar brood of redheads slipped down the bank and paddled unfeelingly away from home and mother.

Why two grown-ups should spare time from their business to hunt the country far and wide for a soul-mate to a stray cackling goose (rare species), the country folk couldn't understand, or why after the first sets of duck eggs were lost in a disastrous incubator fire, a bird man should be dispatched to distant Manitoba to find and bring home three hundred native fledglings in brooders.

There were many other things going on around Tobey Pond beyond the comprehension of the natives. The first winter that active operations were started the old wood roads across the tract were as free and open as before. Not a fence had been erected; there wasn't a gate in sight. The villagers' dreams of wire barricades received a pleasant shock. When they asked, they were told that a game refuge was a sanctuary for the hunted life of forest and stream, a home where it could rest and feed and multiply, not a trap or a prison; that such things were as contrary to nature's laws as blinds, snares, and pitfalls; that a perfect feeding and breeding range should be absolutely bare of human device and that birds and animals should be as free to go as to come.

"But these pintails and gadwalls which you brought all the way from the northwest," asked a credulous one; "are you going to let them loose?"

"Why not?" said the man in moccasins. "True enough, they'll go South with the first flight of birds, but they'll come back in the spring and bring others with them!"

The unbeliever wanted to know if the same tactics would be followed with the mallards, black duck, redheads, the canvas-back, Canada geese, partridge, pheasants, and all the rest, and he was told that a percentage of both the migratory and non-migratory birds each year would be pinioned and wintered

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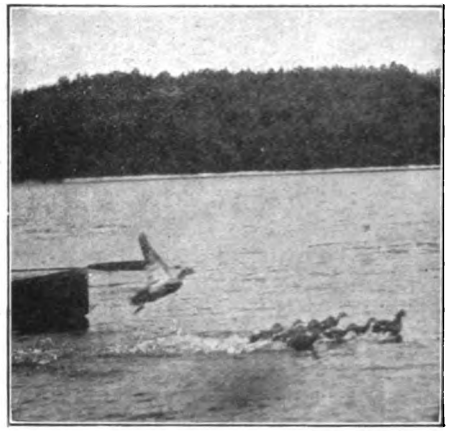
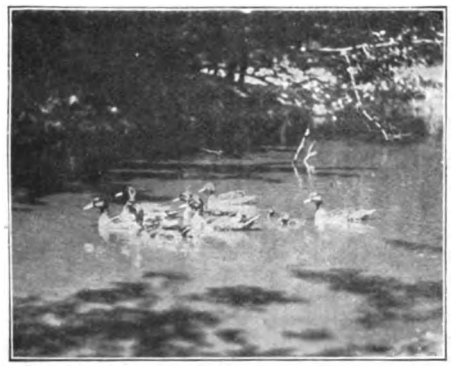


THIS OLD MALLARD REFUSED TO LEAVE HER BROOD UNTIL THE BOW OF THE BOAT ALMOST HIT HER



A FLOCK OF GRAY MALLARDS WITH THREE YOUNG DUCKLINGS FOLLOWING CLOSE BEHIND

PINIONED CANVASBACK, REDHEADS, AND PINTAILS IN BREEDING ENCLOSURE

GRAY MALLARDS BROUGHT FROM MANITOBA IN BROODERS AND RAISED IN REFUGE

under protection for breeding purposes the following spring; also that some might be left on the range to call i their migrating brothers and sisters The rest would be freed.

"Say, Mister," said a hill man, "that' darn white of you fellers. You don't care *what* becomes of them so long as you *raise* them! I get you now. You'r just stocking up to give us some regular old-fashioned shooting!"

Thereupon, it was up to the game refuge men to begin all over again and try and explain that they were neither showmen nor market hunters, and what they were building was not a shooting preserve, absolutely not! Further, they declared they would prosecute anyone found on their land with firearms. Gunmen must keep off. The bird men were trying to make their tract as barren of every shape and description of magazines and breechloaders as it was a hundred years before the first colonists trekked their way up the river valleys from tidewater.

They couldn't, however, stop persons shooting outside the property when the law was off. Therefore, they went to the adjoining property owners and asked them to post their lands, and once they had explained their reasons not only did the neighbors consent, but asked the bird men to call again whenever they needed further assistance.

The more the neighbors, rich and poor, big and little, learned what the game refuge men were trying to accomplish the more interested they became

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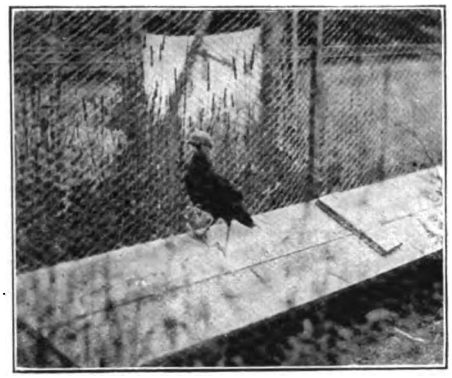
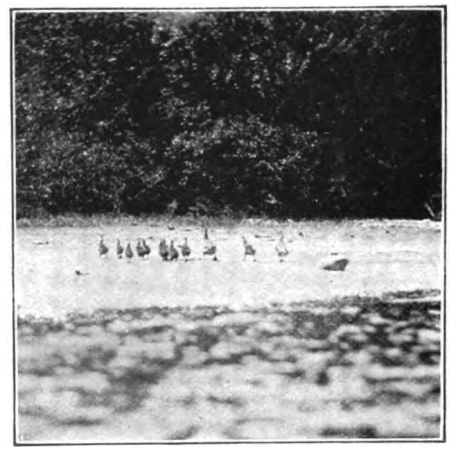


A GOLDEN PHEASANT COCK IN THE BREEDING PEN



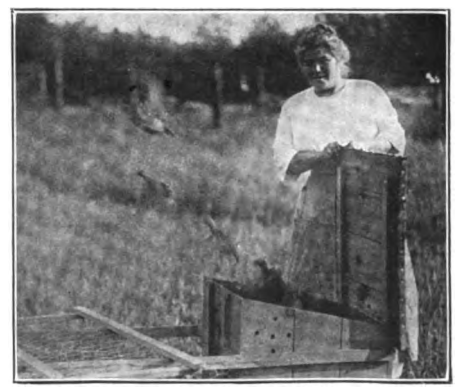
PINIONED GRAY MALLARDS ON THEIR WAY TO THE FEEDING GROUNDS

The game preservation infection spread and eventually there was a string of influential neighbors through the Hills, all pulling for the two pioneers and going to Hartford to show the Governor and the Legislature what a group of citizens were trying to do for the State if the State would only lend a hand with helpful legislation. Thus was started a movement which some day will save for the people a fine natural forest and game reservation; a great natural playground, such as Providence seldom puts aside for mankind.

Halfway between the Naugatuck and the Housatonic it lies along a ridge of hills from 1,500 to 1,800 feet above sea level, is covered by a second growth of pine, hemlock, birch, beech, and maple, and watered by spring-fed streams and ponds. The new owners found that native deer protected by Connecticut's game laws were increasing, but that feathered life, with the exception of hawks, eagles, crows, owls, Canada jays, and a few of the hardier song birds, was conspicuously scarce. A few partridge seemed sturdy enough to fight off total extermination, but that was about all. Grayheads in the village remember as boys of hunters gunning for duck on an old mill pond then in the center of the present refuge. The tract in those days was traveled by woodsmen and charcoal burners.

Before that, about one hundred and twenty-five years ago, there must have been quite a settlement in the uplands, for on the records of the Presbyterian

PHEASANT FIELD AND COOPS ON THE TOBEY POND REFUGE



PHEASANT CHICKS RELEASED FROM THE NIGHT PENS WHICH PROTECT THEM FROM "VARMINTS"

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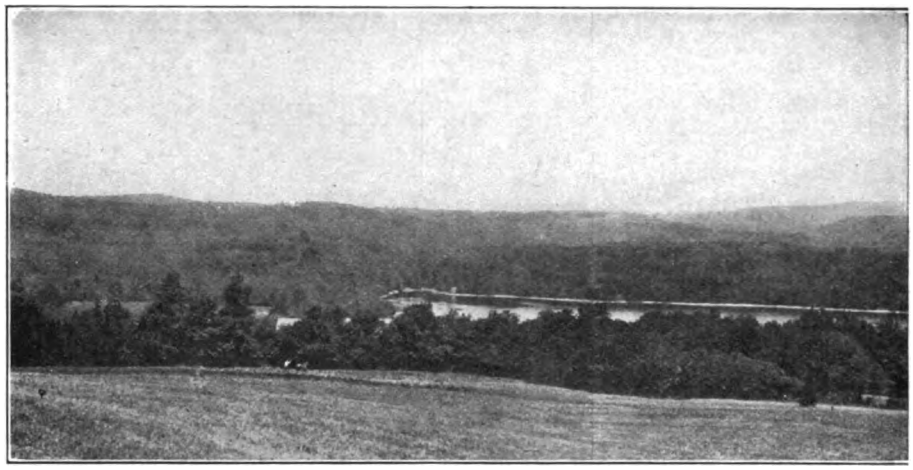

LOOKING NORTH FROM

The pheasant field is the meadow in the lower left-hand corner and the duck and geese

Church in Norfolk, the nearest village, there is an entry dated 1820 noting the discovery of a community living in these hills—"a hamlet of heathens, living in intellectual, moral, and spiritual darkness"—and recommending that a missionary be sent among them. To-day, one may travel for miles through these woods and not come in contact with any other sign of human habitation than a few ancient apple trees, with here and there the remains of a saw-mill. It is difficult to imagine a better setting for a game refuge such as these men desired.

Once they had taken possession, the first thing the new proprietors did was to run a survey and get a first-hand acquaintance with the land. The survey was severe on shoes and clothing, but it resulted in the discovery of several added possibilities in the development of the game refuge. The partners planted wild rice and celery in the existing ponds, located sites for two new ponds, and opened up a number of wood roads and trails overgrown with underbrush years ago. They put salt licks and hay ricks on the deer runs and drew plans for the hatcheries for the pond nearest the big house. Then the immediate fulfillment of their dreams received a rude shock.

Early that winter, several crates of gray squirrels from Wisconsin and a few pens of Hungarian hare had been liberated on the uplands. A few weeks later, signs showed that the gray squirrels had started South. Gamekeepers brought in as experts said that the squirrels and hare had been chased away by "varmint" life and declared that if the owners ever expected to do anything with birds they would have to free the refuge of varmints first. The name "varmint" to these woodsmen covered all the pirates and marauders of the bird and animal kingdom common to that region —foxes, bobcats, coons, skunks, red squirrels, weasels, hawks, owls, and crows.

How could the war of extermination be started, asked the refuge men? With dog and gun? No; the owners wouldn't use either. They had declared against guns, and, besides, dogs would only worry the native deer. Then "doctor" meat and leave it on the trails, advised the woodsmen. Not in a thousand years! The bird men were getting indignant. Then get out and trap. That was about the only thing left to do, and in the opinion of the woodsmen that process was "slower than rain up Cat Holler."

"Them animals must be *some* varmints!" said one of the visitors. "If they catch big gray and fox squirrels, what d'you think they'd do to geese and duck and pheasant?"

So that winter was put in trapping. A stranded Scotch gamekeeper, fresh

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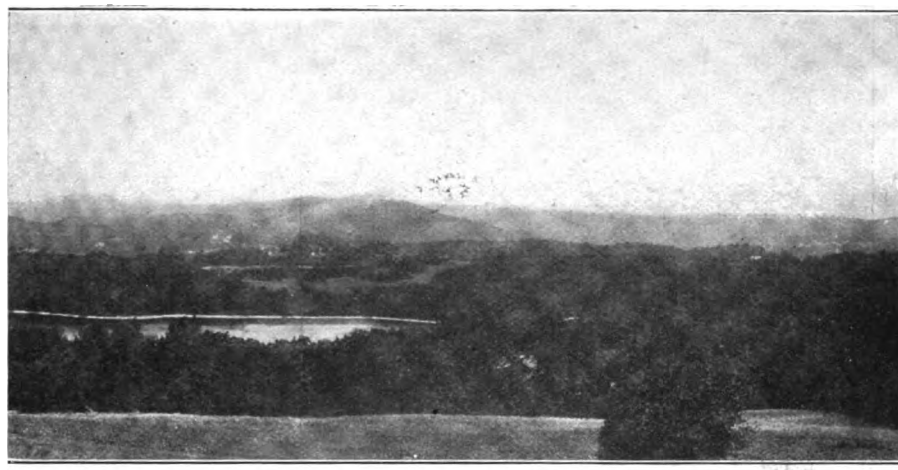

THE GAME REFUGE

ponds lie in the birches between it and the larger body of water immediately to the right.

from the old country, was picked up in New York and sent to the game refuge. If anyone ever looked the part McT—— was the man. He had a brogue, a wide back, and legs like steel. The brogue was as good as Harry Lauder's and the legs carried him over his twelve-mile trap line whether the snow was feet deep or inches. But somehow McT—— didn't get the pelts. He buried his traps and he burned them. He mixed a "lure" that reeked to Heaven. He could find a trail and pick his way through the woods with the best, even if he did get lost one wild night and never get home until the gray of the morning.

But the extent of his trap yield for three months was a couple of coons, a few skunks, and a crow. Not a fox or a cat could he show, although there were signs a-plenty of both. After a fresh fall of snow we often found tracks of foxes leading directly to neatly hidden traps, but instead of entering, each animal would circle it carefully and then lead by and beyond, as if to say plainly in the sign language, "Very pretty, indeed, but not for me."

The Scot was no match in cunning with this Yankee brand of red fox, and if the Scot had been a boaster, Reynard of the Litchfield Hills would have put him to shame, but McT—— was no boaster, and he frankly admitted toward the end of winter that both the New England bobcat and the fox were of a different stripe from anything the game wardens had to contend with in the old country.

After the Scotchman came the German gamekeeper, and he proved himself so familiar with the birds, which at that time were just beginning to arrive, that he was kept busy around the pheasant pens and the duck ponds. The farmer tried his wits against the four-footed pirates and failed, and it began to look as if ridding the refuge of its pests would be a problem unsolved when over in the Mad River country the bird men discovered Dwight Webster, woodsman and philosopher. Dwight was soft of speech and reserved in manner. There were gray hairs in his moustache and forelock. Tipped back in his chair behind the wood stove, he was the picture of inaction; in the woods he stood lean and straight as a beanpole, was tireless on the trails, and went about his trapping with a shrewdness and a cunning that did credit to several generations of Yankee horse traders, trappers, and preachers—a combination difficult to beat.

Dwight took the same traps which the Scotchman had used, and within ten days was bringing out cat and fox pelts, also coons, skunks, and weasels with the regularity of a New York apartment house dweller lugging poultry and vegetables uptown from Washington Market. What

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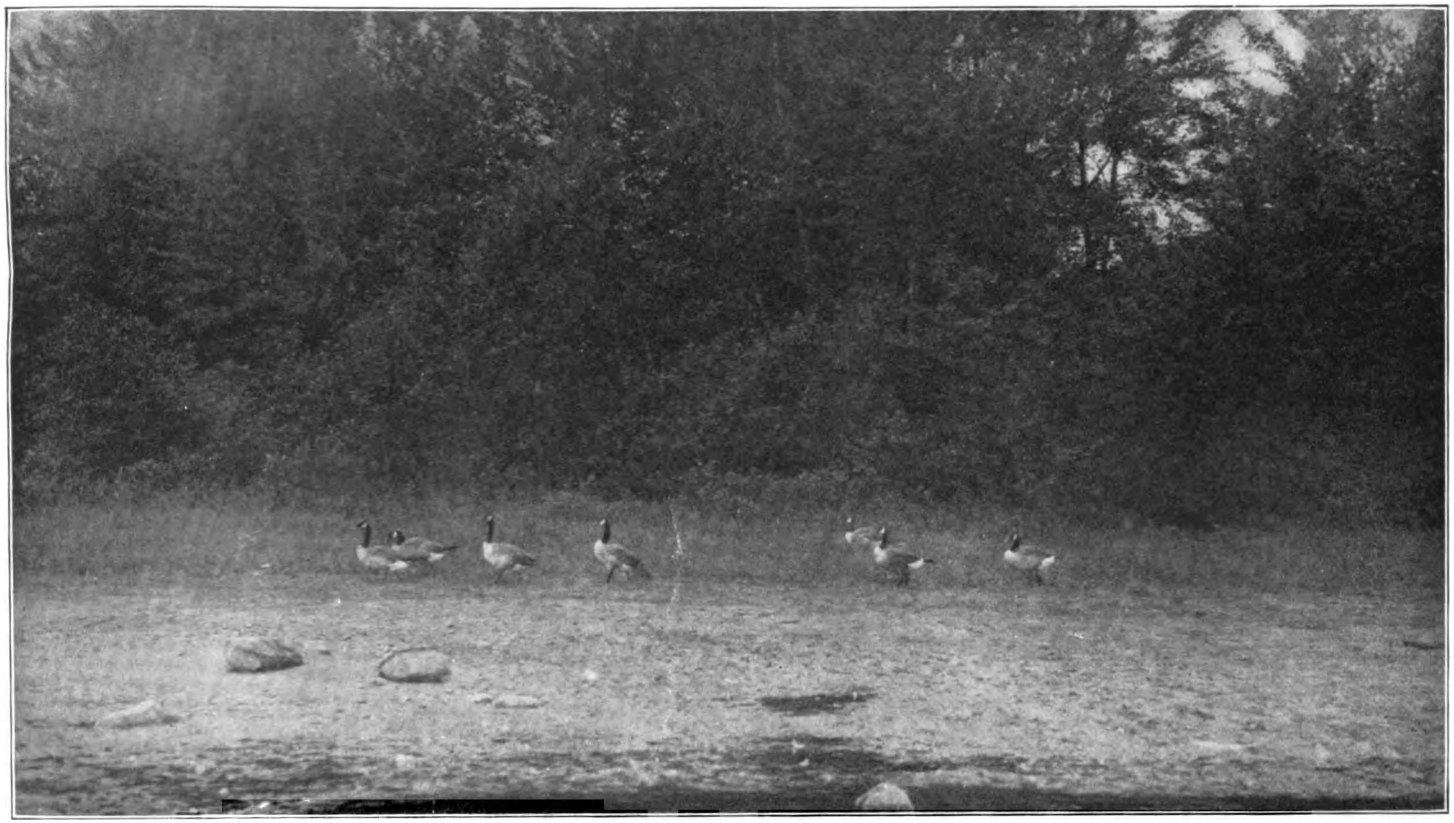

WILD CANADA GEESE WHICH ARE NOT SO WILD AS MOST OF US ARE ACCUSTOMED TO FIND THEM

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he did to the steels as he set them no one knew but himself. That was all part of the magic he spread over the hills and along the trails toward Meakertown. One visiting naturalist declared that Webster could produce a thirty-pound bobcat with the ease and grace of Kellar taking a kicking rabbit out of a gentleman's silk hat!

A cat of this size, and they run up to forty and beyond, is as big as a lean and hard coon dog; a natural born fighter and about as savage a denizen of the forest as lives in these days of six-cylinder limousines. A trap usually gets him by only one leg, and it is then up to the trapper to dispatch his quarry as best he may. As the cat still has three legs, as many paws with nails like knives, a mouth full of teeth, and a powerful body, this is some job. I saw a forty-pound cat killed by a man who called himself a trapper, but who used two loads of buckshot and a club to make the kill, and the carcass was so battered that it was difficult to tell what the animal was. On the pelts Dwight Webster brought in there wasn't a mark or a hole, and he never carried a gun.

"How do you kill?" we asked one day when he brought in two particularly fine pelts.

"O-o-o," drawled Dwight, "just tap 'em on the head."

In two winters' work Dwight cleaned out the worst of the pack, and by his activities limited their ravages to the most inaccessible parts of the timber. Then Seidler, the German gamekeeper, breathed easier. He could make his morning's rounds without finding a fresh kill or coming upon a hidden nest robbed of every egg, and an indignant hen pheasant or partridge scolding nearby. He could smoke his pipe and count heads on the breeding grounds without breaking his deliberations to shy a rock at some marauder. There were peace and quiet in the pheasant pens and soft trills and gurglings from the duck ponds.

Dwight stopped trapping in the winter of 1912-1913, and as the first of the birds for breeding were brought in during the preceding spring, the gamekeeper's charges had a good start in the pens before the traps were taken up in the woods outside. Then it was found that wire *had* to be used—not against man—but against predatory birds and animals. Pens were provided to protect the birds until they could multiply and get accustomed to being hand fed. They were built to afford plenty of room for exercise, plenty of running water for bathing and swimming, and good cover for nests. From the day they were liberated, April 20, 1912, the birds have been as much at home as though they had lived there forever.

There were two pairs of white swan, six of ring-neck pheasant, seven of Hungarian partridge, five mallard (two drakes and six ducks), four pairs of black duck, and one of wood duck. The partridge and pheasant, being shy and difficult to handle, were isolated in a meadow as far removed as possible from visitors and the keeper's cottage. Their pens were roofed with cord netting to keep them in. The ducks and geese, on the other hand, were merely pinioned to prevent their rising and were then liberated in open pens. Later, as other varieties of ducks were received, their wings were also pinioned.

All the birds, with the exception of the swan and geese, mated and soon built their nests, howbeit some nests, particularly the ducks', were hidden so carefully that they could not be found. The gamekeeper picked up the eggs as fast as he found the nests, putting them in incubators. Some of the eggs were placed underneath Japanese silkies (a particularly good setting hen). Altogether, from the first settings, probably one hundred ducks and pheasant were hatched and raised.

By the middle of the summer the keeper's charges had increased to some 200 ducks and geese and about 300 partridge and pheasant. Whether or not the quacking and splashing of the ducks, the honk of the Canadian geese, and the wild cry of a pair of imported Indian cranes had any effect, certain it is that this summer saw the deer come out of the woods and feed near the hatcheries. It drew in a covey of partridge liberated a few miles north by the State authorities. And then, as if for a fitting climax to this wonderful restoration, there came

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with the first sharp days of late autumn first one and then another flight of ducks on their migration south. They dropped out of the sky about dusk, mostly in small flocks, until one morning in December the keeper counted as many as 2,000 ducks and geese resting and feeding in the refuge. The wild birds seemed to know that here they would find food and rest and that here they were safe from attack.

Some of them at evening time would fly to the ponds farther along in the woods; some spent the nights on the water inside the pens. Most of them, however, kept together in the center of the large pond. To all the refuge was only a stop-over on the long journey to the Southern feeding grounds, for, as suddenly as they came, just as suddenly did they depart, and, as was expected, they took a large proportion of the young birds reared in the refuge with them. Some were yet too young to fly and had to stay behind, a few had their wings pinioned to keep them back, and several for some strange reason refused to be tempted away at all.

A count of the birds in the refuge taken in January just prior to the setting in of the coldest weather that year gave the following inventory: Waterfowl—3 canvasback, 18 redhead, 6 gadwall, 10 blue-wing teal, 8 spoonbill, 2 lesser scaup, 29 pintail, 1 mud hen, 3 pair wood duck, 23 black duck, 6 black marsh duck, 36 gray or green head mallard, 4 widgeon, 2 mandarin, 2 swans, 2 Indian Darus cranes, 16 Canadian geese. Pheasants—29 ring-neck, 23 silver, 4 golden.

Up to this time everything had gone splendidly, and the task of conducting a game refuge looked to be an easy one. Then came the losses, just when least expected and from causes least anticipated. Undoubtedly the measures taken to exterminate foxes and bobcat, the roving domestic cat, red squirrels, skunks, and coons kept down the casualties. Without Webster's trapping they would have been much heavier. But as painstaking as the owners had been they were outwitted by owls, crows, and weasels. These three raiders, with the exception of a smudge from a kerosene stove which killed twenty-five ducks, were responsible for the bulk of the losses which began soon after Christmas and kept up through the rest of winter, spring, and summer. Try as they might the refuge men could not and have not stopped the theft of mother birds, their eggs, or their chicks and ducklings.

Here is a sample list of casualties from predatory birds and animals toward the end of last winter: Three black duck killed by weasel, two mallards killed by weasel, eight pheasant hens killed by owl and weasel, three ring-necks killed by owl, one silver cock killed by owl, one silky cock killed by owl. Extreme weather, the mercury dropping as low as twelve and fifteen below some nights in this part of Connecticut, was the cause of only a few losses—one spoonbill, one scaup, and one mud hen—while a Canadian goose was killed by breaking ice, and its mate died from loneliness a few weeks later.

To protect the birds against the weather, wind shields were provided for both pheasants and duck, the pens carefully wired and trenched against the attack of the birds' enemies, and all but about sixty gray and black mallard and the pair of white swan, then driven into the winter inclosures. These swan, the sixty ducks, together with a lame duck who dropped from no one knows where, stayed out on the ice of Tobey Pond all winter, the keeper maintaining a water hole for them to bathe and swim in. All survived, moreover, notwithstanding the low temperature of February, and in the spring were even better conditioned than those which had been given more care and attention inside the gates.

The latter had quite comfortable quarters. The ducks had open water most of the winter. The pheasants' quarters were more exposed than those of the ducks, and the younger ducks and all of those brought down from Manitoba were confined in smaller pens, half open runways with water and half covered with hay and straw. A close watch was kept on these birds for fear they might suffer from the very cold weather, but the young ducks, like the old ones, refused to take any cover whatsoever and stayed out in the open pens day and night. The pheasants were fed a spe-

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cially prepared food, one which is standardized, and the ducks and geese were kept on a diet of cracked corn, rice, barley, wheat, buckwheat, chopped meat, charcoal and grit. Every second day they were given green food. Shiners—small live fish—were tried on the diving ducks, but soon abandoned as food, as the ducks did not seem to relish it.

With the first warm days of spring the pheasants were turned from the larger pens into smaller ones holding one cock and four or five hens, and so built that they might be easily moved from place to place in a large meadow. To the winter stock were added 29 ring-neck hens, 20 silvers, 4 golden, and 24 cross-ring-neck and Mongolians. The ducks and geese were turned loose in bigger runways along one side of the large pond, where there was plenty of cover in which they might hide their nests.

Then began the keeper's job and his troubles as well. He had to keep constantly on guard against owls, crows, weasels, and foxes. He had to feed and count his charges twice daily. He had to find the nests and pick up the eggs as they were laid, putting them under hens, silkies, and in incubators in settings for hatching. Seidler hung lanterns at night to scare away the owls, and trusted to his eyesight and his gun to keep off the weasels and crows by day. The losses continued, however, and greatly discouraged the owners, the keeper, and every employee of the place.

In early summer a very useful ally in the fight against crows and owls arrived in the shape of a trained Bohemian owl brought from the old country by the wife of the keeper. The owl, which was as big as a good-sized turkey cock, could be handled by the keeper, with thick glasses and a heavy cane, and when placed on top of a tall pole in the middle of the pheasant field would flop his huge wings, stretch his neck, and roll his body in defiance to the whole hawk and crow kingdom. If there happened to be any crows in the vicinity by day seldom did "Barney" fail to decoy them for the keeper to shoot. Stopping the destructive raids of the weasels was a different matter, for on account of their size and stealth these little creatures were, and still are, able to get through the most carefully built barricade, make their kill, and get away without detection. The keeper shot several and caught several more in box traps, but still the weasels persisted.

Nevertheless by the first of July, allowing for all losses, a conservative estimate showed that by the end of the summer the total number of birds in the refuge would easily reach 1,600. Up to July 1, 1,262 eggs had been laid by 34 ring-neck pheasant hens, from which 460 chicks had been hatched. Fifty of these chicks had been killed by weasel and fox. Five hundred other eggs were then under silky, Plymouth Rock, Bantam, and Rhode Island Red hens. Fifty-two eggs had been taken from the nests of the golden pheasant and twenty-three hatched and raised. The silver pheasants showed the poorest results, due, no doubt, to the fact that these birds are

SEIDLER, THE GAMEKEEPER, AND THE TRAINED OWL, U-HU

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practically monogamous. From the 20 silver hens 167 eggs were produced, but of these only 15 were fertile. The 15 all hatched, however, notwithstanding an owl caught two of the chicks.

All the water fowl mated, but only the wood duck and the mallard nested, owing no doubt to the presence of row-boats on the pond. The canvasback, teal, pintails, widgeon, geese, brant, and others were also shy, and those ducks which did nest were so successful in hiding that no one could find them until the mother birds came off with their young. The sixty ducks which stayed out on the ice all winter scattered in the spring when the geese were liberated, and being able to fly, nested in neighboring ponds, returning each evening for feeding.

Later, about the middle of July, four pinioned mallards (one drake and three ducks) were taken to Great Mountain Pond, about three miles back in the woods, and liberated upon an island there. An automatic feed trough was left with them, filled. In less than ten days these ducks were joined by twenty-four wild ones, and next season, when the wild rice and celery shall have come up, more ducks will be put in this pond, and here, where absolute privacy is assured, it is believed that even the redheads, pintails, and teal will nest and hatch their young. H. K. Job, State ornithologist of Connecticut, went to Lake Winnepegosis, Manitoba, Canada, last summer, to bring back native stock for this pond.

Of the Hungarian hares twelve came through the winter successfully, and this spring showed themselves with about thirty young.

YOUNG WILD DUCKS TAKING TO COVER. MOST OF THESE DUCKS WERE BROUGHT FROM MANITOBA IN BROODERS

Such is the record of the beginning of an experiment which is bound to prove invaluable to both Government and game associations working along similar lines. Neither of these game-lovers professes to be doing anything which has not been done before, and they both admit that they have a lot to learn. They take satisfaction in knowing, however, that birds from their refuge are to-day ranging through the adjoining country, perfectly at home and fully able to take care of themselves both winter and summer. They know that farmers point to the birds with pride and school teachers have been brushing up their bird lore to keep pace with the children's demand for information. There has been no attempt as yet to shoot these feathered beauties, and the only disposition to capture them, made by ignorant alien laborers, has been stopped by the culprits themselves, once

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the object of the breeders has been explained.

This friendly attitude on the part of the people is not purely local. It has spread for miles along the countryside. Only recently a small boy from another township some distance down the Blackberry River came into the refuge, lugging a basket almost as big as himself. It contained a pheasant cock which he had captured, and when told that the bird was as much his as anybody's, the boy's eyes fairly popped out of his head. Nevertheless, he preferred to leave the cock with the other birds of its kind rather than take it back home, where, he said, he was afraid the "old fellow might get lonesome."

Song birds, too, have taken heart since their protectors have started war upon the red squirrel, the owl, and the hawk, and have planted more trees, shrubs, and flowers. There is a noticeable increase of melody around the houses. Where, three years ago, there were comparatively few of these birds to be seen or heard, there are now nesting within fifty yards of the houses the following varieties: song sparrow, robin, chipping sparrow, catbird, purple finch, hummingbird, American goldfinch, chestnut-sided warbler, cuckoo (yellow billed), red-eyed vireo, chickadee, yellow hammer or flicker, phœbe, barn swallow, and house wren.

And within sound of their notes, every morning and evening, are the following: hermit, Wilson and wood thrush, brown thrasher, whip-poor-will, bluebird, kingfisher, king bird, black-throated green warbler, black-throated blue warbler, red start, bobolink, meadow lark, scarlet tanager, johree or cheewink, downey woodpecker, bank swallow, tree swallow, spotted sandpiper, night heron, and blue jay.

Neither of the two proprietors knows when or where this experiment is going to end, but they both affirm that it will be kept going just as long as they have the time and the money to give to it. Each has been considerable of a naturalist since boyhood, and they have made hunting and photographic trips after big and little game together practically every year since college. This refuge is what they have wanted to start for years, and now that it is under way it isn't likely that they will get tired of it very quickly. Neither man is wealthy according to modern standards, but it would be misleading to give one the idea that this game refuge hasn't cost anything. It has already run into quite a sum of money, and will require a few pennies more, but its owners choose to take their recreation in this manner, just as friends of theirs prefer their fun in a yacht, or with a racing stable or a string of polo ponies.

They believe that they will eventually demonstrate how any man or woman so inclined may with a small piece of woodland and meadow, and at a moderate cost, rear game birds, song birds, and such wild animals as will be an asset to the surrounding country, and take pleasure in doing it. And in developing their game refuge these two city men are carrying on, hand in hand with the birds and animals, systematic and practical forestry, as well as restoring and preserving water resources which have been running waste for years. So, after all, bird men aren't so visionary and impractical as quite often represented.

"Drivers and Diplomats Among Football Coaches" is what Mack Whelan calls his article in November OUTING. It is a picture of the great coaches in action.

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THE FOUNTAIN OF YOUTH

Being a Journal of Misadventure in Search of It

By CHARLES TENNEY JACKSON

ILLUSTRATED WITH PHOTOGRAPHS

IT is rumored that Ponce de Leon failed. Probably he did. But he must have found something almost as good which kept luring him farther into the wilderness. It is still there—that which drew the old Spaniard on; the lure of mystery, the dank forests, the blue line of cypress beyond the bayous, the sparkle of water through the trees. And it still lures. Mr. Jackson felt it and answered. The readers of his story will feel it, too, and want to follow. Perhaps some of them will, for it is the old lure of the old that is new, the distant that is the same and yet always changing.

CHAPTER I

We Take a Chance with Each Other

I NEVER laid eyes on Hen until the day we were introduced at the University Club. It was the North and February, and a gray day of dirty snow; and Hen had one of his spells of dyspepsia. I also was peeved over something—a telephone call, an appointment, cocktail—some triviality which, added to the weather and an accumulated grouch about business, made me eye Hen, as Hen did me, with frank irritation.

What the mischief did Smith mean by introducing two strangers who merely desired to nurse their grouches alone?

Well, it was done, and Hen and I looked gloomily at one another across the table. I muttered something against the weather.

"Yah!" growled Hen. "Wish I was out of it!"

"Rotten!" I rejoined. "And I'm going to cut it."

He looked suspiciously at me. "What's the matter?"

"I don't know. Hair, I guess. Look at it—suddenly struck me I was thirty-five and feel fifty, and have got into a 'Oh, what's-the-use?' state of mind, and—well, what's the matter with you?"

"Stomach. Spent the winter up in Northern Wisconsin trying to forget it. Snowshoed around and ate beans with the lumberjacks and washed my own dishes in ice water—and then my shack got snowed in for fifteen straight days on Lake Flambeau. I couldn't get out. No one could get in. Devil of a session with my stomach—and beans. I got out and blew down here to what they call civilization. Next time a tropic isle for mine." Then he grimaced sourly at me. "Speaking of hair—look at me?"

"You're hitting close to forty."

"Yes, and I want to trail back and feel like Home and Mother and the Big Red Apples. I want it—just a half year of it—and then I'd be ready to buck the game again and not earn the mortal hatred of every man in our sales department. That's why I quit. I found they were all hating me. And it was making me old—at thirty-seven."

"I see," I mused.

Then we both stared truculently at each other and out the window at the dirty snow of the town and the dirtier sky of the North. There was a map of the New World on the wall, and sud-

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THE PIROGUE IS A TICKLISH CRAFT TO BALANCE EVEN IN THE STILL WATERS

denly Hen made a flourish toward it with his napkin.

"Well, let's *git!*"

"Where?"

"Anywhere the sun is shining, and hair grows, and stomachs show some form. Back to the Big Red Apples and the little green ones—back to something to laugh about that isn't smart or clever—just simple, mere good humor, like when we were kids——"

"Back to Youth! Say, old top, you're talking ragtime—you——"

Hen got up and went to that map of North America. He drew a wide circle on it with a lead pencil. Then he made a point somewhere a thousand miles south of Chicago.

"Let's start in here."

"*What!*"

"Paddle around the Gulf of Mexico and look for it."

"Hey?"

"The Fountain. Remember Old Ponce? He got tired of table d'hôtes and investigations and reforms and went to Florida and pawed over that coast looking for the Fountain of Youth. He got in wrong. Why, that whole region is jammed with hotels, and the hotels with people who wouldn't know a decent stomach when they saw one. And their hair—why it comes from Paris, or Roumania, or Kashgar—or some place. Ponce de Leon was goldbricked when he struck that coast. Now, you and I—we'll get a canoe and paddle around the Gulf and find it."

Now I had never seen Hen ten minutes before. And I had never seen a canoe in my life. Curious but true. Life with me had been divided between the dry Western country and the big cities, and a canoe had just never fallen under my eye. And I had never, since grammar school, thought of the Gulf of Mexico. But I eyed that map a minute—and then the weather outside. Then I answered carefully:

"Old boy, I'm with you. I don't see any obstructions in the Gulf except Florida and a few islands, and I suppose if a fellow paddles his canoe quite a ways offshore he won't run into 'em."

Hen looked at me with more approval. "You go telegraph East for a

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A BARATARIA MOSS PICKER IN THE DEEP SWAMP

canoe and have it shipped to New Orleans. I got the rest of the stuff—guns and big fish-rods and tackle and a seven-by-seven silk tent, and duffle bags, and——"

"Piffle sacks——" I concluded. "All right. When can you start?"

He was looking at his watch. "We can catch that 7.30 train on the Lake Front. You arrange for a taxi. I'll grab my stuff and get an expressman."

We arose and clattered back our chairs. Then Hen stopped:

"Beg pardon—what did Smith say your name was?"

Then we both laughed—the first simple and heart-whole laugh we had had since the ready-made mince-pie season opened. "One really ought to know, old man, if one is going off to—to—to——"

"Find the Fountain of Youth? And more hair? And a stomach? Old top, you're right!"

Then we laughed again. The second since the musical comedy season was on. We were taking chances. One does when one agrees—ten minutes after meeting a man—to go roll in a blanket with him. And eat turtle eggs with him. And fight Barataria mosquitoes with him. And be capsized on top of a Mexican Gulf porpoise with him. And hunt pirate gold along with Old Man Captain—but I am ahead of things. We parted on the corner of State and Dearborn in the raw afternoon, and I murmured: "Duffle bags and piffle sacks—well, I'll go order that canoe and throw away my hair restorer."

I'll not rehearse all the croaking about that Club when Hen and I announced our voyage. We were reputed cynics. But I leave it to you. Cynics never go to find the fountain of youth in a sixteen-foot muslin ship. Cynics go in the Pullman with the buffet attached. Cynics were plenty about the Club when Hen and I calmly explained.

Yellow fever, sharks, hurricanes, snake bite!

"Don't you listen to 'em," growled Hen. "Yellow fever is played out. And we'll carry a barrel of snake dope. And when the Gulf is rough we'll sit on the sand and eat turtle eggs. I read somewhere that Morgan's men sacked Panama on a diet of turtle eggs. When it rains we'll sit under a palm tree and read the sporting goods catalogues."

Hen overlooked one trifle. He failed to ask me if I had ever seen a canoe. And I didn't tell him. I hated to be rude to a stranger.

I had to break the news to him some weeks later. We were in a Cajun pirogue on Lake Salvador in south Louisiana, and a big sea charged straight up and warped us fore and aft, and Hen swore at my stroke. I turned and yelled: "Hen, I've knocked all over the short-grass country and the Sierras—teamster, rancher, game warden, pot hunter—God knows what else, but I never tackled a canoe. Which end of the blamed thing is *which?*"

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I heard him stop steering, gaze at the swamp shore over the smother of white-caps, and began to figure up his life insurance. Then he yelled back at me:

"Why didn't you tell me before?"

"If I had, you wouldn't have come!"

"Poor fool!" he mused. "You're right!"

Well, I'm ahead of this narrative again—turtle eggs, Old Pirate Folkses, piffle sacks, the Fountain, and everything.

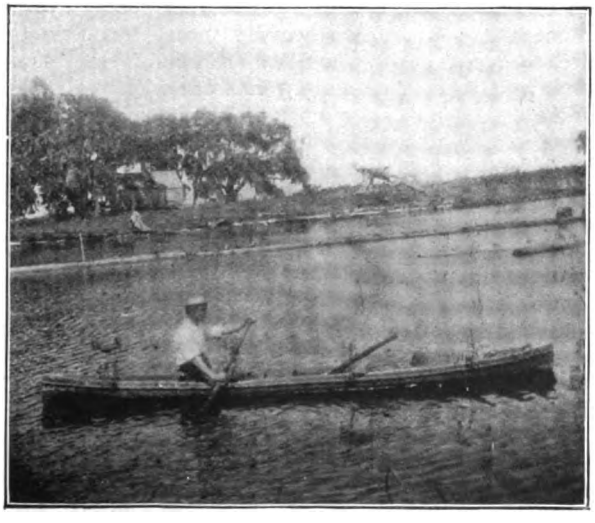
A MUSKRAT TRAPPER'S CAMP ON LAKE SALVADOR

Those last four hours we hustled—and made our train. Hen's outfit was snug in the baggage car ahead. The last thing he got was a hypodermic syringe and some stuff to pump into a fellow when he was snake-bitten. And some sporting goods catalogues, and a lot of Coast and Geodetic surveys back to '79. He made me read all that as we came south; departmental stuff that no tired business man who supports the Republic on his sugar, highballs, steel rails, ad valorem and otherwise, can make head or tail of. When we rolled into New Orleans the next day Hen was still catechizing me on the depth of water off the Chandeleur Islands, and I couldn't tell him. I didn't know any nautical lore. I didn't know a sea cow from a barred Holstein, a tar pon from a tarpaulin, a degree of longitude from a third mate's license.

But enough of this. Five days later two bald-headed men, wearing eyeglasses and crinkly new khaki suits, paddled away from a wharf in Harvey's Canal across from upper New Orleans. We didn't know where we were going. Only there was a brilliant March sun, and the world was as clean as a porcelain bathtub. And down that canal lay a mystic vista of green, sweet-smelling jungle. Someone on the levee said that way we would get to the Gulf.

"Fine!" said Hen. "Now for the Spanish Main!"

I hate to say that we were not in that brand new sea-going canoe we had ordered. We were in a leaky johnboat borrowed from a lean, lone fisherman. Now the johnboat is a peculiar institution. It consists of three cypress boards forming the sides and bottom and with the ends nailed up. They build them by the mile in Barataria and saw off as much as you want. We had not heard a word from our sea-canoe.



THE LONG, SLIM DUGOUT FASHIONED FROM A SINGLE CYPRESS LOG

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A LIVE OAK ON BAYOU BARATARIA

The Cajun fishermen along that canal had never seen or heard of a canvas boat. They haven't yet. Ours—well, that is another story.

Six miles down Harvey's Canal, the scant levee along the banks gave way to the sunken shores of Bayou Barataria. The moss-hung cypress was brilliant with dew and the latanier palms rustled beneath. Hen was sniffing the air. "Old boy, this will rejuvenate you! We're off! Hi, for the Main! The cut of rude winds, the sting of salt spray slapping us as it did Magellan, Balboa, Drake, and Jean La Fitte. Give me the slant of the rain, the good, rough earth, and a bed under the stars!"

Very good for a cynic. Only he forgot to mention that the good earth hereabouts was fine, soggy, bottomless ooze; and that a bed under the stars would be attended by all the mosquitoes, the thundering, big, deep-sea-going mosquitoes of Barataria, that would as soon bite a seeker after youth as they would a pirate. That night I counted six mosquitoes on a section of Hen, not as big as a dollar, and they had trouble crowding on.

We encountered a log raft in that twisting swamp bayou, and to avoid being crushed had to pull our johnboat up on it. And soon we were traveling backwards behind the tow-steamer, and it began to rain. It rained an hour, and all that time we were fighting to get our johnboat off the log raft and headed for the Spanish Main. And when we finally were free and the Louisiana downpour was done, we discovered it was dark. In its canvas case was that little balloon silk tent, and in a duffle was our patent collapsible aluminum cooking outfit, in another our grub, and in other cases our guns, rods, tackle, all snug and watertight. But not us!

We looked off at the gloomy cypress with their waving moss streamers, the snaky black water lashing the sharp spikes, and wondered where all that modish camp stuff was going to be put up. The sporting goods catalogue hadn't guaranteed to furnish dry land to put it on. But we paddled hopefully onward.

"Hi—oh!" said Hen at last, "there's a house."

I saw, on a ten-by-twelve platform over the swamp, a black and windowless shack. We jammed the johnboat through the bottomless ooze and landed. The rain started again and we hustled inside and lit our patent folding lantern. That tie-cutter's shack looked bad. It leaked and was filled with spiders and bad smells. Back home you wouldn't have housed a tramp cat in it. But we tumbled the damp moss in the bunks

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over and over, laid our blankets on it, and started a fire in the clay oven. There was no chimney, the smoke finding its way out through the shake roof. Then we emptied a can of beans into our frying pan, stirred some sweetening in our tea, and beamed through the smoke at each other.

"How do you feel?" queried Hen.

"Eighteen months younger," I answered. "But what in the Billy Mischief is that trying to crawl through the wall?"

It was merely the advance guard of the most numerous array of chameleons, lizards, bugs, *ad lib.,* that I ever listened to. They came on to take the strangers in. When we had crawled into the bunks, the noisy crew raced over our blankets and occasionally into a fellow's ear. And the owls hooted outside in the lashing gale, the mournfullest sound two seekers after the Fountain ever listened to. The mosquitoes chimed in and sung and bit, and with this and the creaking of that shack and all the eerie swamp noises I got up and started a fire in the furnace. We sat there, each wondering to himself whose fool idea this was anyhow.

We recalled the hospitable deputy sheriff at Harvey who had waved us on when we told him we were going to the Gulf in that johnboat.

"Go right on, strangers. This yere's the Free State o' Barataria. The hull swamp is yours!"

We had asked him of pirate-haunted Barataria, with its legends of blood and gold, and he had told us to beware of stingarees, Congo snakes, and red bugs. We told him we were going to catch a tarpon, and he warned us that the *grand ecaille,* as the Barataria Bay fishers call it, had a most unsportsmanlike habit, when hooked, of jumping up in the air and sitting tail first down upon one's boat. Not on a bet would any native ever hook a tarpon. I concluded right there that Hen could catch the tarpon. I would stay ashore and peacefully hunt turtle eggs. Turtle eggs never attacked anybody.

Well, we didn't sleep much that first

A "MANILA MAN'S" FAMILY IN THE PIROGUE WITH WHICH HE EARNS A LIVING IN THE DEEP SWAMP, SUPPLYING DUCKS AND FURS TO THE TRADERS

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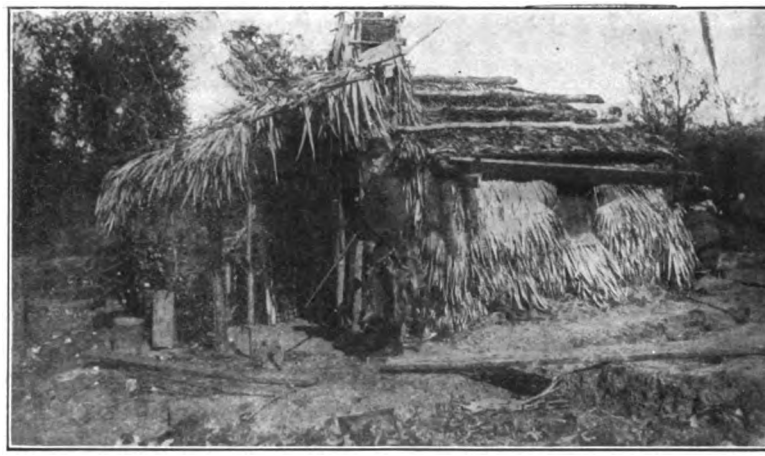

OLD MAN CAP'N JOHNSON AND HIS PALM HUT

night of the search for Ponce de Leon's fabled fountain. Every minute the yowling of the owls was nearer, the lash of the bayou tide stronger, and the mosquitoes hungrier. Near daylight we rolled in our blankets, and, with nothing to the air—and mosquitoes—but our noses, fell asleep. But the next morning—those noses! There was a regular department store bargain rush about the holes where our noses stuck out all night long.

"Heaven," mumbled Hen, "must be a place where nothing ever bites one."

But the next morning we crawled out of that black box to a scene of beauty. The bayou ran like a bright arrow through cypress which was moss-hung and all a-glitter with waterdrops in the sun, and the south wind was perfumed with magnolia, bay, and blackberry bloom and that indescribable heavy sweetness of the deep swamp. The mocking-birds and cardinals flitted about us; the gay chameleons scampered on our baggage.

"Fine!" said Hen. "And now for eggs and coffee."

We "made breakfast," as the Cajuns say, out on the wet and sunny platform, and I had a first experience with Hen's scientifically assembled kit. Now, I was no sportsman of his stripe. My roughing was all done back in the days when a Western boy counted his cartridges as gold, fished with a nickel line and a "bobber," and started on river trips with nothing but a hunk of salt meat and a shirtsleeve filled with corn meal. Duffle bags and piffle sacks! I had never heard of them.

Nothing will divert a man in camp as much as two duffle bags. He wants some sugar—not the tabloid stuff which Hen insisted on carrying for emergency, but real Sugar-trust sugar. So he unties a duffle bag. Inside the duffle bag are seventeen little waterproof bags, all alike and each tightly tied. The seeker after sugar unties each of the seventeen little bags and ties them up again and then concludes the sugar is in the other duffle. So he dives into that and unties and ties up seventeen more little bags, and then discovers that the sugar must be in the piffle sack, or else Hen is sitting on it.

It always was strange how the thing you wanted was in the very last bag of the other duffle, or else not in either. And when we loaded the johnboat we discovered that, despite all our careful elimination of superfluities in that scientific aluminum tabloid canoe kit, we had three hairbrushes aboard. Three hairbrushes for two baldheaded men down in the Barataria swamps!

"We'll keep 'em," said Hen. "You can't tell what this climate will do to a fellow. Shove off that misbegotten johnboat, there. We'll paddle on until we find our canoe is in New Orleans and then go back for it. Meantime we'll cruise in the johnboat."

So on in that beautiful, sprawly

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swamp we went. Once an alligator poked his snout inquiringly out of the reeds, and Hen began to assemble his automatic rifle, which would shoot I don't know how many times. I got out our copy of the Louisiana game laws to see if alligators were in season.

"Game laws, nothing!" said Hen. "Didn't the deputy tell us this was the free State of Barataria, and anything goes? Ain't we headed right down into the haunts of Jean La Fitte and the buccaneers? Can you imagine Captain Kidd reading up the game laws to see if it was the closed season for Spanish treasure? Me for that 'gator!"

Then we stood up in the johnboat and I waved the game laws and Hen his automatic.

"Steady her!" yelled Hen, and pulled the trigger, once, twice.

Nothing happened except that Barataria alligator winked an eye lazily as the johnboat floated past his starboard bow.

"Snap—snap!" we t Hen's highly modern rifle again. I'm a son-of-a-gun," he murmured.

"Right on that seat by you," I said, "is quite a pile of screws and things which you took out of that rifle's innards and never put back."

"Couldn't find any place for 'em," retorted Hen. "And—Holy Banana! See, there's a string tied to that alligator!"

Up on the swamp edge now I saw a pickaninny staring at us with round, wide eyes. He was dressed in a meal sack with holes cut in the corners for his arms to stick through. And he held a rotten rope, the other end of which appeared to be attached to the submarine structure of that four-foot alligator.

"Hi, boy!" I yelled. "Look out for that 'gator!"

"He won't hurt nuffin, boss. Ah hung him out heah to see if he done won't catch hisself some breakfus'. Mammy says he done eat mo' eround de house dan fou' houn' dawgs, and Ah gotter make him work fo' his livin'."

"Can you beat it?" gasped Hen, turning to me perspiringly.

"If he don't wiggle hisself pretty soon Ah'll sho' haul him asho' and give him a beatin'. Dat lazy 'gator don't do nuffin but hang eround de do' step waitin' fo' me to gin him a ham bone."

Hen laid down his automatic and picked up his paddle. "Get out of here," he muttered. "This is no place for a sportsman's son! 'Gator on a string sucking a ham bone! Oh, my degenerate wilderness! I reckon if we run onto a bear down below he'll be turning a hand-organ!"

We hurried on around a bend to get away from that ham-bone alligator. It was a peaceful spot, and we floated while Hen began to reassemble his automatic gun that would shoot I don't know how many times. We discovered a venerable colored citizen sitting on a log fishing for perch.

"Whe' you-all gemmen gwine?" he inquired reasonably.

"We don't know," responded Hen. "But how do we get there?"

"Yo' keep on a-gwine. Dat *Tiger* boat she come erlong dis evenin' and pick yo' up. Dey's gwine to be a ball down below. Dat *Tiger* boat she's a-comin' loaded with lumber an' ladies."

Lumber and ladies! "Hooray for the ball!" I said.

But Hen looked peeved. That ham-bone alligator had knocked all the romance out of Barataria, the beautiful, for him.

"If I hadn't left all those screws out of my gun," he growled, "I'd have soaked that nigger's 'gator so he'd never want ham bones any more. As for ladies and balls, I decline. I came here for sport—and more hair. For pirate treasure and a stomach that will start without cranking. And tarpon and anything else in season or out. I'll show these natives something. Why, a real live sportsman never hit this region!"

CHAPTER II

The Old Pirate Folkses.

EIGHTEEN miles of winding bayou Hen and I paddled that leaky johnboat. But one bit of real dry ground did we see, and that was a series of unkempt and abandoned fields hemmed about with the blue-gray wall of Barataria forests. Over the mangrove-hidden ditches and Spanish

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bayonet we saw here and there a forlorn house; then on from this we went into the woods. The tide was setting down through the ninety miles of waterways stretching to the Gulf and bore us easily on. The sunken banks, with their cypress, tupelo gum, swamp maples, latanier palms, with now and then a yellow canebrake, grew lower, and as night drew on we wished we had put up at the last tie cutter's camp we had seen.

But at sunset we struck inhabitable land and turned out of Barataria Bayou into Bayou Villere just where it broadened out into Lake Salvador, a thirty-mile stretch of tidal water across which we saw dimly the oak-grown knolls among endless stretches of swamp cane. They were the ill-famed *Chenieres* of the pirate legends, and there is not one into whose white shell shores the natives, generation after generation, have not dug for La Fitte's lost treasure.

And just in the bend of the bayou was Berthoud's plantation, around which cluster vague traditions of thriftless gold and bloody romance. Here, a hundred years ago, as close to the city as they dared bring their shallow-draft privateers up from the great network of waterways bordering the Gulf, La Fitte and Beluche, the last of the line of buccaneers, were wont to lie while their prize goods were disposed of in New Orleans auctions, winked at by the thrifty burghers of the time. And through this winding channel the audacious traffic so throve that the legitimate trade of New Orleans up the river fell to nothing before it; and all during the first decade of the last century neither the precarious provincial governments of France nor the United States, during the cession of Louisiana, could drive La Fitte from his strongholds of Barataria.

Ten privateersmen and numberless smaller vessels and a lawless army of a thousand men, La Fitte mustered at Grand Terre at the height of his power, and it was not until Colonel Patterson's final expedition in 1814 broke up the pirate forts on the coast islands that La Fitte relaxed his hold on the waterways. And the next year, after treating with the Federal government for pardon, he led his horde, with the cannon dragged from their abandoned ships, to New Orleans and fought with Jackson against the British, thereby gaining amnesty.

But ways of ease did not fit well with the buccaneers' tastes, and history records that, driven from Barataria, La Fitte seized the port of Galveston under pretext of aiding the Texans against Mexico, and tried again to revive the ancient and honorable trade of piracy. In 1821 a British sloop-of-war sent his last schooner to the bottom outside Galveston harbor. Just what became of La Fitte is a mystery of romance that Louisianians still love to speculate upon. It is supposed that he attached the remnants of his buccaneers to the fortunes of some of the new-born South American republics and died, as he had lived, a free companion of the sea.

Hen and I landed on Old Spanish Man's point that night and eyed that stretch of lake and then our thirteen-foot johnboat with much caution. It was a darkling night and the waves rolled in almost over the low bank of shells on which we put up our new crinkly silk tent. Back of us lay the dank prairie cane and beyond that the flooded forest. We wished we had stayed at the abandoned plantation a mile back on Bayou Villere. But it had looked mournful enough with its two great brick chimneys of the ancient sugar-house rising from the mangrove-hidden ruins.

Time was, before the war, when Berthoud's three thousand acres and canals and overshot water-wheels raised eighty thousand dollars' worth of sugar and rice a year and worked four hundred slaves in its fields. Now it was given over to trappers and turtle catchers and the last of the Berthouds lay under the tangle of vines on the shell mound that raised their graves above the crevasses and the hurricane tides. And across the bayou from the decaying slave quarters and the ruined foundations of the great house lay the straggling, century-old village of Barataria. Trappers, hunters, crab fishers, moss pickers, the Cajuns pick up a living season in and out, and we had not been along its one-plank sidewalk fronting the water edge very long before we understood the genial

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deputy sheriff's reference to the "Free State of Barataria."

Game laws or any other laws went little when one got outside the fringe of river towns. Not that the people were lawless in the sense of disorder, for never did we meet anything but simple, kindly hospitality from them. But as to game or fish protection, they simply shrugged their shoulders. For a century their fathers had trapped and hunted through Barataria woods—*eh bien?* Who was to stop them? Barataria was ruled by one autocratic family that filled all the important parish offices and controlled elections; and allowed the bayou folk to make their own regulations.

It was while we were there that the sheriff made his laconic reply to the New Orleans newspapers when they demanded why one of his henchmen was not arrested for killing another man: "Come and take him—if you can!"

Hen and I discovered a tiny little garden back of the shell reef with the tidewater mauling about the potato rows. And while we were gazing at this, along the bayou came a big, crazy skiff, leaky and cumbersome, the oar-blades nailed to saplings which were tied to the tholes with strings. And standing up, pushing these, was the quaintest little man we had ever seen.

"Ah saw you boys passin' this way," quoth he, "and I follered to see what you-all was headin' out in the lake fo' in this stawm. Man, you'll be blowed clean off this point into the swamp if the northwesteh comes! Look at the salt water runnin' into my gyarden? I sholy will have to put rubber boots on them taters!"

We thanked him for his interest; but the little tent was up and Hen was making coffee over a palmetto-leaf fire, so we concluded to stay. Old Man Captain Johnson seemed incredulous when we told him we were traveling for pleasure. He eyed that johnboat doubtfully. Then he rubbed his skinny elbows through a hickory shirt that he must have worn since the Surrender. His old hip boots were tied on with strings, and his hat was mended with black thorns, while at his heels were two mongrel hound pups—a hungry and picturesque outfit was this of the veteran of Lee's ragged host who had installed himself on Spanish Man's Point and was raising potatoes where the pirates had once raised Cain.

Did he know anything about pirates? Did he?

"You boys look right back yere."

He led us beyond a ruined oak overhanging his garden ditch. There was a neat grave of white shells and a board at the head!

"Right yere is the last one of them Old Pirate Folkses. Yes, seh, when I come down river seven year ago a-huntin' for treasure, I done heard about this old boy buried right yere, where he died forty years ago and the wild hawgs ate him. None of these Cajuns around yere would take care of his grave, so I sorteh fixed it up. I reckon he wasn't such a bad pirate after all, only he pizened hisself with liqueh!"

"Now, Captain," said Hen, "if the hog ate him, how could they bury him here?"

"I dunno," responded Old Man Captain, " 'less they buried the hawg. But they wouldn't do that—Cajuns su'tin'y loves hawg meat."

We asked further concerning this pirate-fed pork. It seems that one Armand Pelletier, one of La Fitte's old band, came back in his extreme old age to live on Spanish Man's Point. Many was the tale he could tell of marauding in the Caribbean and of how, here in Bayou Villere, in after years, he had helped scuttle a slave trader with all its human cargo battened under the hatches, to prevent its falling into the hands of the Government. And many was the tale the fearsome natives told of Armand's knowledge of buried gold.

Finally, two mysterious strangers arrived and lived with the ancient buccaneer in his shack. And the three of them dug, here and there, among the shell reefs, and finally, here on Spanish Man's Point, they found La Fitte's treasure. Then the two strangers got old Armand very drunk one night, and the next day were gone; and the discomfited pirate crawled out of his bunk to discover a large hole in the ground! He at once got drunk again and announced that the two generous strangers

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that had befriended him had got away with twenty thousand dollars in gold; and thereafter he did nothing the few remaining years of his life but sit on Spanish Man's Point with his demijohns and relate his tale of woe. Then he died alone and the "hawgs" did the rest.

And here, half a century or so later, Old Man Captain Johnson was gently apologizing for the ancient buccaneer's failings.

"No, seh," repeated the Captain, patting the neat little grave, "wasn't such a heap bad pirate, I reckon. Only bad fo' liqueh!"

Then he cast his eye upon our sporting goods catalogue outfit piled down there by the pirate's mound. If ever such a thing as an aluminum frying-pan or a collapsible cup or a jointed rod and reel had been in Barataria he was unaware of it. He picked up Hen's silver reel, much absorbed.

"I reckon you-all is goin' to hunt mo' treasure with this little jigger-stick. Sho' make that old pirate tu'n oveh in his grave to see you boys come fritterin' round with you' patent treasure machine."

We disclaimed being treasure hunters.

"Then I reckon you is fawtchune tellers."

"No."

"Then you is detectives?"

"Not a bit!"

"Then you is goin' to give a show in that tent?"

"Show? Not unless it is Hen trying to flip a mule-colored flapjack in this forty-mile wind!" I answered. "No, Captain, we're merely after more hair —and pleasure."

"Pleasure?" He shook his head. "Never done hear of anyone comin' down yere fo' pleasure!"

He stirred the coffee Hen gave him and smiled gently, and then set off in his battered skiff to his camp. He didn't believe us. And the next morning, when we got out in the loveliness of a Louisiana spring, the gale all gone, and the scarlet tanagers flitting in the oaks against a lustrous sky, we discovered two lanky Cajun trappers sitting in their pirogues along our camp, also shaking their heads. Our fame had spread all down the settlement. Two more mysterious strangers had camped on Spanish Man's Point! Thereafter we had visitors a-plenty.

Shy, gentle, brown-skinned fishers and muskrat trappers, who pulled their tiny swamp canoes up on the shells, sat down, drank coffee with us, and smiled. We made another pot of coffee and smiled. Then they made one and smiled. By way of conversation we waved the coffee pot and they waved muskrat skins, and everyone smiled. Then they examined Hen's camera with all the hyphenated attachments, the automatic gun, the tent, and the reflector baker, and argued and commented in Cajun.

In the afternoon we visited the village. There were three "sto's," each raised above the swampy margin of the bayou on stilts, as indeed were all the houses. Around their walls was the high-water mark of the last crevasse. When the river levees break the Baratarians live in their luggars or on higher platforms. No one cares much. They are a happy-go-lucky lot. They trap lazily in the great salt marshes, crab lazily in the bayous in the spring, run catlines and pick moss in the summer, find a turtle now and then or a 'gator to trade at the "sto'," play "Beeg Dog" on their galleries, and watch the girls, of Sunday afternoons, walk by on the single-plank walk from house to house.

Back of the straggling row of houses rises the frowning wall of forest; in front is the slow-moving bayou; on the bank the old men mend baskets and the children play in the sun as the red-sailed luggars drift by from Grand Isle on their way to the great river to the north. The "Free State!" So it had been since their fathers fought and smuggled with Jean La Fitte. Yankees may come and go with their chatter about reclaiming the swamps. The Cajuns shrug:

"Le Nom de Dieu!"

As for game wardens and fish commissioners—first catch your Cajun. He is a bold man who will follow into the deep swamp. And if an agent of the law is found floating face downward in the lilies—*Tres bien?* The shy swamp-

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ers shrug again: "Name of God—how strange!"

The following day along came the *Temple Tiger,* sure enough, loaded with lumber and ladies. Would M'sieu Captain take us down? Where to? Oh, anywhere! Certainly, M'sieurs!

Hen and I had found a moccasin in our bed the night before, and as Spanish Man's point was already pretty well crowded, what with Old Man Johnson's potatoes, the pirate's grave, and our camp, we decided to move.

Hen eyed the ladies with disfavor. Still he had washed his shirt in the Captain's mush kettle when he knew the *Tiger* boat was coming.

"No girls for me," muttered Hen, in his bemushed shirt. "They're as unsatisfactory as turtle eggs. A fellow can't ever cook turtle eggs right—and I'm tired of them as a three days' diet. The swampers have brought us turtle eggs steady since we camped here."

Old Man Johnson was grieved to have us go. We were real "white folks," he said, and, besides, he wanted us to stay and dig treasure. There was great prospect.

"I come down river lookin' fo' pirate's hide-ups. Yes, seh, I got it straight from a widda woman up on Bay Natchez. She done tole me to go find an old plantation with wateh runnin' east past three live oaks on a point. Yere it be. Minute they told me the Old Pirate Folkses was around yere, I squatted right down. Raise taters and hunt treasure. Only thing I lack is that chart the widda woman had. Wanted to buy that chart, but how'd I get eight dollehs? She was a fine woman, that widda. I always did love spiritual business. She wanted me to stay and quit driftin'. She says: 'Rollin' stones git no moss.' 'Widda,' says I, 'and a settin' hen never gits fat.' So I ups and come down yere lookin' for the pirates' hide-up. When I see this point and three trees with wateh runnin' past, I say: 'By Gravy, Widda, yo' sho' is spiritual!'"

Now I hated to leave. I looked at Hen, grouched over those ladies and lumber on the *Tiger* boat. And I looked at Old Man Captain, with his ragged hat held together by thorns. There was romance. There was youth, shining right in his eyes! I almost wished that Hen and I did not know so much. I would like to have gone off with Old Man Captain in his leaky boat and dug up something or other. Every man ought to have a Widda Woman who would send him off to hunt treasure. But when a fellow's got to be thirty-five, with no Widda showing up, he's lost much interest—and hair. Hen rubbed the mush out of his shirt collar.

"Sling on that duffle and let's get off somewhere. Good-bye, Cap. When we come back we'll fry some more turtle eggs."

"And sure hunt pirates' hide-ups," I added, and Old Man Captain beamed all over his gentle face. He went back to his hound pups and dreams of the Widda Woman. And we went on to trail down Ponce de Leon's quest and tinker with Hen's digestion. The Baratarians waved shy and kindly adieus. We had had a fine week of it.

But never a word came in the biweekly mail of our missing canoe.

"By all the duffles and piffles," said Hen, "we'll paddle that fool johnboat from here to Yucatan!" He waved a hairbrush at me. "The Fountain of Youth, old top, has never yet run dry!"

The *Temple Tiger,* with a half-dozen furtive-eyed damsels of varying shades, tucked away on top of her lumber, wheezed out into Lake Salvador, which was a sheet of gold in the sunset. She was mightily loaded, and with the huge bales of black moss on her cabin top looked like an animated scrubbing-brush heaving along upside down. The gas engine made a fearful racket and the belts to her stern wheel pounded the guards. She turned south across that wondrous lake into Bayou Perot, past gray-green sunken woods and silent, "trembling prairie."

The Cajun girls forward, their feet hanging to the water, began to sing presently as the full moon rose, while a dark-eyed boy, seated on the pilot-house top, played the guitar. The *Tiger* boat made no more than five miles an hour, and no one seemed to know just where we were going. The genial

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Captain offered us whiskey and coffee, refused any passage money, and said he'd take us "somewhere," adding that we ought to go forward and "wiggle 'round among the ladies." He was glad to acquire us, it seemed, for he was taking them to a "ball" down below, if the boat got there. If not to-night, then to-morrow night—he'd stay over for it.

That seemed good. Going somewhere to a ball, if the boat got there, along with a cargo of lumber and ladies. The *Tiger* boat turned down Bayou Perot, between level fields of marsh grass and water shimmering in the moon. Now and then a hail would come off ahead, above the voices of the singing girls, Jack Hammond would bawl to the engine boy, the wheezing motor would stop, and a lean-faced muskrat trapper would shoot his pirogue alongside. There would be an animated search among the ladies and lumber for some stuff he had ordered, someone would toss down a few loaves of bread out of the gunny sacks, and on we would go. Now and then one of the trappers would hang alongside for a mile and drink whiskey with the skipper; and at Point Legarde, we waited an hour while crew, Captain, guests, and natives argued the price of catfish. Indeed, so late was it by now that the girls began to clamor about the "ball."

"M'sieu Jack, we sho' never go down with this *Tiger* boat again. You-all ain't a-goin' to get anywhere till mawnin'."

That was exactly what happened. It was long after midnight when the *Tiger* boat reached Clark Cheniere. By that time the fiddler and the guitar player had absorbed so much of the *Tiger* boat's liquid cargo that they were asleep on top of the lumber, and the girls climbed down in a skiff and were sent ashore with many a tart comment on Jack Hammond's dilatory schedule. They had cast many a curious glance at the two strangers sitting on the duffle sacks amidships, but to Captain Jack's repeated invitations to "go mix with the girls" we had been reluctantly inclined. The Cajun girls were coy. The skiff load put off and disappeared into the fringe of shadows above a white, gleaming shell bank, which was all we could see of the Cheniere. Then Hen and I rolled in our blankets and slept face up to the moon, with the pleasant voices of the island girls coming over the water. Very romantic, you say. But the *Tiger* boat had many sorts of ants and bugs and all of these came for'ard to take the strangers in.

CHAPTER III

The Old Sto' Balls

THE next morning we took in Clark Cheniere. We had to get out early, for the entire population came in skiffs and pirogues and climbed on board. We made coffee on top of the lumber with many comments from the spectators. Everybody knew us. The tale had spread. The soft-voiced Cajuns fingered our camp gear and discussed our khaki trousers. They plied the *Tiger* boat crew with questions about us. To us they were courteously shy, but curious; so much that finally we asked Jack Hammond if we could not be put ashore and find a camp in some spot more secluded than the village street which seemed to be all there was to Clark Cheniere. It was merely a dozen unpainted houses straggling along the white shells facing the open roadstead where a score of luggars and a few gasoline boats lay. Among these house yards a few great oak trees arose, and beyond them stretched the illimitable salt prairie. Far above this and the seemingly shoreless open water to the south one saw other oak groves (*chenieres*). That was all except the blue water and the bluer sky.

A few silent groups of seine menders and crab fishers baiting their lines squatted under the chinaberry bushes and mangroves. From one of the watery lanes leading from the marsh to the back yards of the row of houses came a solitary rat trapper. We heard the harsh cry of a rail from the salt pools, and snipe were running on the beaches at each end of the habitable shore. We idled among the groups all morning long. A shy, curious people of indecipherable blood—Chino-Italian, Filipino, Spanish, Creole, Indian, renegade Irish,

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or American. The sun had put the same swarthy touch to all, and years of contact had fused their speech to that droll dialect of the Cajun which is more like the tongue of the tough slums of the northern towns than anything else. "Dis," "dat," "fadder," "modder,"—that was what we heard from them all, regardless of blood-type.

In front of each house, drawn upon the shell beach, were their pirogues. Trapping in winter, shrimp hauling in summer, selling the catch to the little gasoline boats which chugged down from the river weekly—this was their round of life. The gray houses seemed forlorn and untenanted, the glassless windows barred. A barefooted, dark-skinned woman peered furtively at us as we passed, and children played among the rotted hulks of ancient luggars drawn on the beach. In each yard was a charcoal furnace on which the cooking was done, and this was usually shaded by a palm thatch or a grass plait. There was a water famine imminent, for the April skies had been cloudless for some weeks and the only fresh water within sixty miles of the Cheniere was that caught in the cisterns from the roofs.

Hen and I put up our little silk tent on the gleaming shells just around a point from the village. To eastward swept broad Bayou St. Denis, winding on through salt marshes to Barataria Bay and then the Gulf. Across were "Africa," "John-the-Fool," "Des Amoureaux," "Old Cheniere," each a lonely camp of the hardy, mongrel people who, for a century, have defied the Gulf hurricanes and clung to their frail homes. There was not a bit of land within miles that rose more than twenty inches above the Gulf tides, and when the sou'easters blow the natives gather about their boats, for few there are who do not have tragic memories in their families of the storms that destroyed Cheniere Caminada with its twelve hundred souls, or the Last Island hurricane, which Lafcadio Hearn celebrated in his story of "Chita."

But this April the waters were very blue and still. Hen and I gathered a few twigs and grass stalks and built a fire for the evening meal. We were at it when we heard a soft clatter among the shells and two shy, brown-eyed boys came through the mangroves. They came to invite us to the "Ball," and, having delivered the message, retreated precipitately.

We wandered around the shell point to the village when the big, full moon was rising. Long before we reached the chinaberry grove we heard the tinkle of the guitars. It seemed that all the islanders had met at the "new sto'," kept by Juan Rojas, a Filipino-Italian, the village head-man, and were waiting for us, who were, after a fashion, the guests of honor. At least after our arrival the folk formed in an impromptu procession and down the street-beach we went, the guitar players and the fiddler, still tipsily uncertain of his feet, leading the way. It was a wondrous night. The perfume of magnolias and of the fig and orange trees was in the soft air. The luggars, their red sails furled, hung at anchor off the beach, and here and there as we passed their laughing crews joined our parade. Men and women, girls with magnolia buds in their hair, boys in painful celluloid collars, babies hanging to mothers' skirts—on we went.

The ball was in the "old sto'," and five smoky lanterns lit the rough floor. A languid young fellow was peeling a candle over the boards, and at the far end two kegs of beer were on the counter. The fiddler and the guitar players were soon ensconced beside them, and without ceremony began a waltz. The floor manager was a son of old Rojas, a handsome, dark-faced youth who wore a baby-blue shirt, yellow pants with stripes of pink and purple—such pants as never yet *you've* seen—and as a badge of authority a huge red rose wrapped in tin foil about the stem. He informed me that his sweetheart had brought it for him from a Bayou Perot camp, and that she had tended it all spring.

The younger folks were whirling over the rude floor in no time. The elders and the round-eyed Malay and Filipino children sat about the old sto' counters, the door was jammed with an entranced crowd of music lovers, the beer keg had its adherents, and the ball was on. Little girls of nine with blackberry bloom about their necks danced with solemn,

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swarthy-faced fishers, and between numbers wandered hand in hand out to the gallery where the live oaks threw their shadows athwart the shells. Along with the droning of the guitars and violin I heard the splashing of the giant gars in the roadstead and the soft lap of the waves under the luggars' bows. Every harsh, crude outline of the Cheniere was hidden in the magic of the moon —a night of quiet beauty, of adolescent mirth and faraway charm.

It was hard to believe one was still in America. Not even the midnight lunch of sto' bread, sausage, shrimp, and beer, with the bemused fiddler trying to make us a belated speech of welcome, could take away from the entrancement. The younger folk had become shyly acquainted with us; the girls out in the gallery giggled and commented in their Cajun hybrid tongue. Hen tried some of his college French on them with disastrous results; they and their brown-armed young men laughed. Then Sim, the fiddler, and his assistants fell to the music-making. How long the ball went on I do not know. Hen and I wandered quietly off down the shell beach at two o'clock and crawled in our tent. But afar, through the wondrous night, I still heard the guitars.

We came "down town" late the next day. And, much to our surprise, we were told that there was another ball on that afternoon and night. In fact, as Captain Jack Hammond said, there would be one continual ball as long as the islanders could detain the fiddler and keep him sober enough to play. The unfortunate musicians were at it again at three P. M., and with two hours' intermission for supper the ball went on into another night of dreamy revelry. The *Tiger* boat staved in port.

"These people, they don't hear music often," said Captain Jack genially, "and long as the beer holds out we'll stick around."

I now understood the *Tiger* boat's schedule. If you stayed by her long enough you would get "somewhere." However, Hen and I were so pleased with the Cheniere, and, besides, had no particular place to go, that we told Captain Jack we would remain. And the next morning, three "balls" having been crowded into her thirty-eight hours' stay in port, the *Tiger* boat got away for somewhere. They carried Sim and the two guitar men on board. Some of the ladies went out and perched again on the lumber. But some of them decided to stay. Perhaps they hoped to catch another orchestra before nightfall.

"We-all could just dance all week," said one fair damsel (not so fair, either, now I remember), "but dat *Tiger* boat, he take Sim down to Manila. If you-all stay 'round maybe we get a man to fiddle off dat *Hazel* boat when he come nex' week."

We-all assured the fair-dark one we-all would stay. Not that we were so mightily taken with sto' balls, but the Cheniere was interesting. We lounged with the fishers under the chinaberry trees and at the sto'. We learned that Juan Rojas, the Malay head-man, had been on the island for forty-five years; he had deserted from a Spanish merchantman in New Orleans and fled to the swamps, and this, we found, was the general vague history of the Chino-Malasian peoples of Barataria. Rojas had married an Italian woman and his handsome sons showed the breed had not been in vain. The young men wandered Sunday morning along the beach, giving oranges to their perfumed sweethearts. In the afternoon they got up another ball! That is, they waltzed without music, but to a great clattering of feet on the sto' boards.

At the upper end of the beach was a typical colony of the Gulf coast lakes, a seine company headed by one Gyp Baily, whose luggars were shrimp catching in the lower waters. The six men of the seine company had been brought down from New Orleans under the promise of making from four to ten dollars a day by holding a share in the company. They were a forlorn lot, barefooted, ragged, in debt to the sto' and unable to get away. We had heard many tales of peonage down in the "Free State." This was an instance. The men had been advanced a few dollars and plenty of whiskey and now, no matter how they toiled at the seine, they seemed unable to pay for it. No boat would take them

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away. Two who tried to walk north through the illimitable marsh were lost, and when the boss went after them with a shotgun and a skiff they were glad to get back to the Cheniere.

In the evening we were approached by two bronzed young Germans who crept under the mangroves to our tent and told their troubles. They were educated young Teutons, but spoke little English. Otto had been to school eight years in Posen; Paul was a tanner of Darmstadt. They had shipped to come to America and deserted on the New Orleans levees. Wandering about the city, they had come on a man who told them of the money to be made in the Barataria shrimp camps. They wanted to get on to Kansas, where Paul's sister lived, but had only the vaguest idea where Kansas was. So they came down on a bayou boat to Clark's and entered the seine crew.

Each man had a share, the Captain a share, the boat a share, the seine a share, and the Captain's wife a share for doing the cooking. All expenses were shared proportionally, but when it came to profits the fishers were at the Captain's mercy, for he alone took the catch to New Orleans each week, and, as Otto put it, "Mostly it's two dollars and forty cents in debt to him we are. Someway our accounts run all the wrong way, and we owe the boss eighty dollars, he says. And we no shoes, no money; and no boat will take us off the island if the boss says no. *Ach,* is dis a free country, dis America we come to?"

The work was hard. The seine company was out at four in the morning, the men wading to their necks to draw the shrimp seines. Breakfast came at ten o'clock, although the usual coffee had been served on rising. Bean stew with chunks of pork fat, bread, and coffee was the breakfast. Otto said that dinner was the same, except that the beans were white instead of red! The crew complained that, though every man paid for it, the fare at the boss's camp was far better than the crew's. And a favored man or two ate at the boss's table—there was always a favored lieutenant who helped outvote the seine haulers.

"Here's Irish John, he never eats with us. And dey had ham and butter and cheese on the Captain's table, too. And last week the Captain's wife made a cake and all the island women came to eat it —and we pay for dat cake!" Paul's hopeless wrath was almost comical. "We pay for clothes and beds and oil and repairs to dat seine, and last week we send up a hundred hands of fish and sixty baskets of crabs. It ought to be worth a hundred dollars, but the boss he come back and say: 'Boys, we lose forty dollars on dat catch!' "

The two German lads went on with their grievances. We made them sit at our campfire and have supper. "Every time dat *Tiger* boat come to the Cheniere we have a ball," went on the castaway, "dance and have some beer! Dat's to keep the men from getting ugly, but we never get out of debt."

We asked why they must work for Baily, and were told that the only other company on the island was one headed by Romaine Serviess, a sort of family affair. And anyhow, none would interfere with their boss's methods. And there was no law, no appeal—it was indeed the "Free State," with a corrupt Parish administration above them. The courts would not act against the bayou traders, boat captains, and important personages.

(Since our sojourn there, the Federal Government, let me add, has interfered in the Barataria peonage and has sent one of the "Big Chino" bosses and proprietor of a shrimp camp to the penitentiary.)

Paul and Otto spoke with contempt of their fellow-workmen. In all matters of company division the men were so ignorant that computations were made by counting beans. "So many beans, so many dollars," added Paul. "*Ach,* and dose mongrels look down on us!"

I think that hurt them worst of all. The Chino-Italian, Malay-Cajun polyglot islander looked down on these two sturdy, clean-blooded lads of the North! I asked them why they did not appeal to their consul in New Orleans by letter, and Otto shrugged with a smile. They were *deserters!* And they had come to be Americans, but free men.

We condoled as best we might—and

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gave them some of our provisions. Otto begged us not to appear too friendly to them when in the village. So we met the boys the next day, when all the younger men were kicking a rude football down the beach, the weather being too squally for the fishers to go out. Otto was the gayest of them all—he raced and yelled and outkicked them in sheer excess of youth. Despite their lot they were the merriest, carefree adventurers I ever met. Paul came up to me and whispered: "Anodder ball to-night! And more beans—*red ones* dis time!"

When we went down to their camp among the alligator pears and scraggly palms later, Otto was making the marooned men roar by mimicking the Captain's wife. He wore a sprig of chinaberry bloom in his hat and took it off to hold out to us, while Paul held aloft a cardboard smeared with red beans: "Help the Poor!"

The Cajun girls came—five of them—to our camp and invited us to the ball. They had got a fiddler from John-the-Fool Island. And another night of dancing. The next day they began again at ten in the morning. "Dat music he won't stay long," explained the fair one. Hen and I attended—and also a sixth ball the following night. The entire population was laid out after that.

The last ball was at Gyp Baily's, and the guests assisted at moving out the furniture to make room for the fête. The next day we heard the host lamenting that no one was around to help move it back. So it stayed outside a week, and the family ate in the shade of the chinaberry tree and looked at their dismantled domicile. I asked one of them if I could not assist in moving the stuff in.

"Oh, sho', Man!" said he. "Let dat furniture stay out. Dat *Coquille* boat, she come along nex' Saturday, and mebbe we catch some more music fo' a ball."

Happy island! Since we left there Clark Cheniere has been battered and riven by hurricane, its oaks twisted; and its houses lean crazily on their stilts along the white shell beach. But I doubt not that the simple, hardy lake folk are still watching to "catch more music."

(*To be continued*)

In November Mr. Jackson tells of Blackberries and Snakes among the Swamps of Barataria

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WHEN SAILORS WERE SAILORS

By FELIX RIESENBERG

III

FROM CAPE HORN TO SUMMER SEAS

CAPTAIN NICHOLS was a good deal of a mystery to us forward. He seldom appeared on deck except for a few moments of a fine morning, when he would bob up, "take a sight," and stump deliberately down the companion to the chronometer, counting the seconds out loud on his way. At noon he "took the sun" alone, though once I remember seeing the Mate take a meridian observation. I was at the wheel at the time, and our first officer came aft shortly before eight bells carrying an ancient "pig yoke." His sleeves were rolled up, and a greasy shine on the arc of his instrument told of efforts at polishing. Somehow he could not get the sun to behave, for the curious relic seemed sadly in need of adjustment. He soon retired in disgust, and never showed up with it again.

The Captain, on the other hand, was quite regular in his methods of navigation. He watched the course closely, having a particularly fine "telltale" in his cabin, as everyone of us had evidence by the uncanny way in which he would pop out of the companion at the most unheard of hours of the night, walk to the binnacle, and seldom except when the helmsman was off the course.

I met the Captain a number of years afterward in Philadelphia. He was then in command of a fine steamer, and I was second mate of another vessel of the same line. In the course of a pleasant visit I asked him how he managed to keep such close watch on the navigation of his ship without any particular assistance from his officers.

"By staying awake nights, sir," was his laconic reply.

At any rate, whatever his method, Captain Nichols knew pretty well where we were at all times.

On the old ships, and the *Fuller* was a very good example of her class, the master was housed in truly palatial style. On our ship the Captain's quarters were spacious, taking up two-thirds of the cabin and running the whole width of the vessel, and fore and aft from the mizzen mast to the lazarette. The Captain's bedroom, for he enjoyed the comfort of slumber in a large mahogany bunk built after the model of a four-poster, took up the space of some three staterooms on the starboard quarter. This opened into a cozy after cabin luxuriously paneled in mahogany between fluted columns of the same wood, the carved tops being picked out with gold leaf. Other rare woods of a lighter shade were used in the center panels, and the whole had the appearance of a costly yacht cabin.

His bathroom, connecting with a large salt-water tank filled each morning by the deck washers, was on the port side, and two other spare staterooms opened into the after cabin from port. A bulkhead divided this from the forward or mess cabin, off which were the pantry, storeroom, steward's room, and slop chest. The mates were also berthed in two staterooms on either side, but their doors opened into a sort of thwart ship vestibule running the width of the forward cabin just beneath the break of the poop. The cabins were lighted by large brass lamps swung in gimbals just below the skylights.

This serial began in the August OUTING.

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A repeating rifle, in a rack above the Captain's bunk, and two revolvers on each side of the chart table, comprised the offensive battery. The finely balanced "telltale" was slung beneath the after cabin skylight, and a long brass telescope reposed in a rack in the companion. Typical of the best traditions of the sea, such were the quarters of the Captain of the *Fuller*.

On a bright Sunday morning, just after taking his A. M. sight, the Captain came on deck and announced that Staten Island was somewhere close ahead. It was our first spell of good weather in many days, and we were coiling down the gear after the morning wash down. "Send a hand to the main skysail yard, Mr. Zerk," ordered the Skipper.

Land, Ho!

I was handy to the rigging, and at a nod from the Mate sprang up the Jacob's ladder and onto the ratlines, going up like a monkey, out over the futtock shrouds, up the topmast rigging, narrowing to the topmast cross trees, in through the horns of the cross trees, and on farther up the t'gallant and royal rigging on the slight rope ladders abaft the mast. Coming to the skysail mast, hardly larger round than the stick of a fair catboat, I shinned up with the help of the halyards and swung myself astride of the yard, my arm about the aerie pinnacle of the main truck. From my vantage point the sea was truly an inspiring sight, clear as crystal, the limpid air stretched for leagues about over the vast blue ocean. I felt as though I had been suddenly elevated to a heaven far above the strife and trouble of the decks below.

For the moment I forgot the object of my climb in the contemplation of the sparkling scene stretching to the far horizon. I glanced down to the narrow deck below, white in the sun, the black tops of the bulwarks outlining the plan of the ship against the deep blue waters; my eye followed the easy curves of the squared canvas on the main, the great breadth of the yards extending to port and starboard, and I wondered that so small a ship could carry such an avalanche of sail as bowled along beneath me over the waters. Aft, a foamy wake stretched for a mile or two, for we were sailing at a fairish speed with the wind a point on the port quarter.

I saw the men flaking the fore tops'l halyards clear for running on the top of the forward house, and I saw the Mate watching me from the fore pin rail, his head thrown back as he gazed aloft; then something told me to get busy, and I looked far ahead to the south. A faint blue streak on the horizon held my eyes. Accustomed to the sight of land from out at sea, through my voyages in the school ship, still I hesitated to name it. We were sixty days out, and land looked strange. Again I brought my eyes to bear upon the sky ahead and there was no mistaking the dim outline of high land rising from the sea.

"Land ho!" I hailed the deck.

"Where away?" came the voice of the Captain.

"Half point on the lee bow, sir."

"All right! Lay down!" shouted the Mate, evidently not intending that I should further enjoy my lofty perch on the skysail yard.

We raised the land rapidly, the breeze increasing slightly as the sun rose. At noon Staten Island was visible from the deck and by eight bells in the afternoon we were sailing past the bold shores some ten miles distant and drawing the land well abeam when we hauled our wind on the other quarter and headed boldly for "Cape Stiff."

Captain Nichols might have ventured through the Strait of Le Maire, with the weather we were having, though at the best it is taking chances to keep the land too close aboard when in the troubled latitudes of Tierra del Fuego.* Countless ships, with the noble *Dirigo* among the last of them, have ground their ribs against the pitiless rocks that gird those coasts. However, we were enjoying the rarest of Cape Horn weather—sunshine, fair wind, and a moderate sea. For the first time in many weeks we livened things with a chantey as we swigged away on the braces and tautened

* See "The Toll of the Straits," by Charles Wellington Furlong in OUTING, October, 1911.

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every stitch of canvas with well-stretched sheets and halyards.

Marshall had just started the chantey "Whiskey for my Johnnie," and the two mates joined in the chorus, Mr. Stoddard and Chips having finished their Sunday night supper and stepped out on deck as the fun commenced. "Oh, whiskey for my Johnnie," went the song.

Jimmie—Yes, whiskey made me sell my coat.
Sailors—Oh, whiskey, my Johnnie.
Jimmie—Oh, whiskey's what keeps me afloat.
Sailors—Oh, whiskey for my Johnnie.
Jimmie—Now, whiskey is a sailor's drink.
Sailors—Oh, whiskey, my Johnnie.
Jimmie—We'll sell our payday for a drink.
Sailors—Oh, whiskey for my Johnnie.

When we pumped her out that night at the main pump, for the ship was almost on an even keel, we noted the Skipper stumping the quarter deck and ducking up and down the companion. The cape pigeons were circling close to the ship and far above swung an albatross. "There is something doing with the glass," remarked Frenchy. "We'll have some weather before long."

But in spite of these dire predictions the day broke fair, and we were again regaled with a glimpse of land, jagged, somber peaks, jutting up into the sky to the north like the cruel teeth of a dull saw, gray blue on the horizon.

I was aft coiling down the gear at the monkey rail when Captain Nichols stumped past me from the break of the poop. He had a pair of binoculars in his hand, and, passing the glasses to me, pointed to the southernmost promontory, a dull knob rising from the sea.

"That's Cape Horn over there, Felix. Take a good look at it; you may never see it again if you were born lucky."

Almost staggered by this sudden burst of good fortune, I brought the glasses in focus on the dreaded Cape, my whole body thrilling with the pleasure of looking through the Captain's binoculars at that distant point of land, the outpost of the New World, jutting far into the southern ocean. I doubt if the gallant old Dutchman, Shonten, who first "doubled" it, experienced half the exhilaration that I did in beholding that storied headland.

At four bells I went to the wheel, and while the watch swabbed down the decks I was privileged to watch the distant cape out of the corner of my eye, between times keeping the "lubber's line" of the compass bowl on sou'west by sou', for the Skipper had shaped the course a point or so farther off shore. The wind in the meantime had veered round to west-nor'-west, blowing directly off the land and with increasing force. The light sails were taken in and by eight bells we were under t'gans'ls, reefed mains'l and spanker, jib and topmast stays'ls.

At noon the wind had veered farther to the west, we were by the wind with starboard tacks on board, the spray from a rising sea breaking over the fo'c'sle head. The temperature went down with a rush, a leaden sky shut out the blue, and Cape Horn vanished in a cloud cap over the land astern. We were heading due south. All hands were roused out at six bells in the forenoon to take in the t'gans'ls, mains'l, and jib. The wind was rapidly increasing in violence and by eight bells we had the *Fuller* stripped to her lower tops'ls, close reefed main upper tops'l, and storm stays'ls. The sea rose to mammoth proportions, fetching as it did from the very ice barrier of the Antarctic.

Cape Horn Weather

The canvas aloft soon became stiff with ice, and all gear on the ship was coated with frozen rain, for the ship was swept by a succession of rain and hail storms. At nightfall we were hove to the wind, on the starboard tack under a goose-winged main lower tops'l, reefed main trys'l, and fore storm stays'l. The oil tank forward was dripping its contents on the sea, and two bags prepared for this emergency were slung from the fore and main weather rigging.

The storm, for the wind had now increased in velocity to fully sixty miles an hour, held steadily from the west until midnight. Then a sudden backing sent the wind to nor'west and in the squalls the *Fuller* lay over on her beam ends. All hands were then on deck, remaining aft near the wheel house. The

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fo'c'sle, galley, and after cabin were awash. Four men braced themselves at the spokes of the wheel under the Second Mate, relieving tackles were hooked to ease the "kick" of the rudder, and preventer braces and rolling tackles, got up earlier in the day, were hove taut to steady the heavy spars aloft. All gear streamed to leeward, washing in the sea through the open scuppers. A fierce boiling of white, phosphorescent wave-caps lit the scene, and the sleety spume shot over the ship in a continuous roar, drowning all attempts at shouting orders.

The Captain and the Mate stood at the lee of the mizzen mast, lashed to the monkey rail. The rest of the crew crouched to lee of the cabin trunk, knee-deep in the water. Below, Chow and Komoto, the steward, huddled in the water at the after companion, invoking such aid as their gods afford. Only one figure dared to venture forward during the black night; the lanky figure of Chips, skinning along the life line to the fife rail to sound the well, his sounding rod sheltered from the wet under his coat.

All things have an end and the gray streaks of dawn broke upon us, revealing a scene of utmost desolation. We were soaked with salt water and frozen to the marrow in a temperature some ten degrees below freezing. The main lower tops'l had blown out of the wire bolt ropes during the night, though we never missed it until morning. Twenty feet of the lee bulwarks were gone, and a flapping rag of canvas at the main hatch told us that the tarpaulin was torn. All that seamanship and skill could accomplish was done in handling the *Fuller*. Looking forward through the whistle of wind and spume cutting across the sharply tilted rigging, the sight was one of terrific strife, as though some demon ruler of the sea had massed his forces for the destruction of the wooden handiwork of man who dared to venture those forbidden wastes.

The torn hatch cover was a serious matter. The Mate, followed by Axel, Brenden, and Frenchy, worked his way along the deck, and after much trouble they wedged down the flapping canvas. By noon the weather abated somewhat, and we got the ship under fore and mizzen lower tops'l and close reefed main upper tops'l. Before night we had sent down what remained of the main lower tops'l and bent a spare sail. That afternoon, the jib having been torn loose from its gaskets by the sea, six of us were ordered out to secure the sail by passing a line round and round the sail and jib boom.

Brenden, Skouse, Frenchy and I were on the weather side and Joe and Gharky lay out to leeward. The job was almost finished, two seas had already drenched us, and we were chilled with the cold. The ship rose to a heavy roller, plunged through the trough, and scooped into the heart of a heavy blue sea, taking it right over the fo'c'sle; we held on for life as the head spars, with their clinging human freight, dug into the blue water.

Overboard and Back

When she shook free the water thundered aft over the fo'c'sle head, smashing over the forward house and down the lee gangway to the main deck in a cataract of foam, taking everything before it. We were left clinging to the jib boom like drowned rats, that is, all but Joe. Aft on the poop the Mate heard our cries, and, springing to the rail, he yanked a bight of line from a pin and hove it overboard, catching Joe just in the nick of time as he rose close alongside. As she heeled to leeward a dozen hands hauled the half-drowned Joe on board. The Captain took him into the cabin and gave him a drink of whiskey to steady his nerves, and Joe went forward, more thankful for his drink than for the narrow escape.

We got a watch below that night, and the cook managed to heat some coffee, but cold salt beef and hard tack were all that the kids contained when the watch went below for supper. Wrapped in our damp clothes, we stole a few hours of necessary sleep.

In latitude 56° 29′ S. and longitude 68° 42′ W. from Greenwich, about sixty sea miles S.W. by W. from Cape Horn, lies the island of Diego Ramirez, a weather-worn peak jutting from the

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black waters of the subantarctic. Ten days after fetching away from the Cape we beat back and sighted this grim sentinel, the outpost of the tempest and the gale—ten days of such seagoing as seldom falls to the men who nowadays go down to the sea in steamers.

Wet and cold and actual hunger had become the rule. Old Jimmie lay in his bunk, his right arm in a sling from a dislocation, roughly set by the Captain and the carpenter. The galley fire had hardly been lighted an hour at a time during those trying days. Cold salt junk—from the harness casks to the table—comprised the mainstay of our rations, not to mention the daily whack of mouldy, weevily hardtack. Had it not been for the steaming-hot slops called tea and coffee, we should have surely perished. Our oilskins were shreds, boots were leaking, and every stitch of clothing in the ship was damp except when dried by the heat of our bodies.

When off Diego Ramirez we passed the American ship *Shenandoah,* Captain "Shotgun" Murphy, bound from 'Frisco to Liverpool, with a cargo of grain. She was racing two English four-masted barks and dropped her hook in the Mersey a month ahead of them.

We were close to the wind on the starboard tack and standing about due west; the *Shenandoah* was running free, with the wind two points abaft her port beam, carrying everything to t'gans'ls, stays'ls and jigger, a truly beautiful sight, and the first ship we had seen since leaving the *Tam O'Shanter* off the Hook.

When abeam we exchanged the courtesies of the sea, dipping our ensigns from the monkey gaffs and running aloft our "number," the gay string of lively flags, pennant, and burgee—J, V, G, B, of the International Code—the universal language of the sea. The *Shenandoah* also ran up her number, a spot of color in the magnificent spread of canvas on her yards. The sky was dull, but the air clear, and the deep blue of the sea smothered white under her bow. As she rolled the yellow gleam of her copper flashed under the long black sides, and her white decks were visible from the *Fuller.*

We had sighted the sail dead ahead, and, having our starboard tacks aboard, were accorded the right of way. Hitchen, of the other watch, gathered with a group of us forward to watch the stranger. Being something of a scholar, the little Englishman delivered himself of the following verse:

> If close hauled on the starboard tack,
> No other ship can cross your track;
> If on the port tack you appear,
> Ships going free must all keep clear;
> While you must yield when going free,
> To sail close hauled or on your lee.
> And, if you have the wind right aft,
> Keep clear of every sailing craft.

And in obedience to this Law of the Sea the four-masted ship *Shenandoah* starboarded a point, passing the *Fuller* well to windward, and just south of the Island of Diego Ramirez.

Fair Weather Ahead

We were then over two months at sea, having reached the turning point on the long course to Honolulu. The Atlantic with its trials lay behind us, and just in our wake the sullen waters off Cape Horn lashed themselves against the coast of Tierra del Fuego. Ahead of us stretched the broad Pacific. A favoring slant from the south, that held for nearly a week, sent us bowling northward, the air becoming more and more agreeable as we cut down the latitude. Great rollers followed us and passed on ahead, to expend themselves in the vast expanse of ocean to the north, and several albatross formed a convoy almost to the edge of Capricorn.

Here, too, we caught some Cape pigeons before leaving 50 S. Lat., the little black-and-white birds gobbling bits of pork towed overboard on a fishhook. There is a tradition among sailors that these birds cannot be brought into the northern hemisphere alive. It is said that the Royal Society of England has offered a handsome reward for a live Cape pigeon, delivered in London.

On running into warmer weather we used the first chance offered to dry out our clothes and bedding. We never really succeeded in this until the tropic rains gave us the necessary fresh water

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to wash the salt out of dunnage; until free of salt our things were so highly hygroscopic that the least fall of dew made them damp and clammy.

The rough passage around the Horn —seagoing with the bark on—worked the discontent out of our systems and with the return of fine weather all hands cheered up and the dog watches became lively with hotly contested arguments on all topics under creation. These discussions would last for days at a time, and usually remained undecided, as none of the contenders would give an inch from their positions, whatever they might be.

For a long time Martin, Joe, and Tommy, of our watch, indulged in heated discussion as to whether fish was meat or whether it was not, Joe taking the negative, while Martin and Tommy insisted that fish and meat are the same thing.

"If it ain't meat, what is it?" asked Tommy. "Is it vegetables, or what?"

This always stumped Joe, but he stuck to his guns and came back stronger each time. "It's fish, that's wot it is, F-I-S-H—Fish!" his voice rising above everything in the heat of argument.

The debate finally closed in a particularly violent session that continued as the watch went aft to muster.

"I'll fish you, you thick-headed ass," interrupted the Mate, addressing the aggressive Joe. "Fish, is it? I'll fish you good and proper. Get a pot of slush and grease down the mizzen topmast. For every spot you drop on deck, your fisherman, you can stay up an hour of your watch below."

Here ended the argument, much to the satisfaction of all of us.

Jimmie Marshall had a copy of the Bible, a red stamp on the title page of which read "Property of Seaman's Bethel, Sydney. Do not take from chapel." While lying up with his arm he delved industriously into the lore of the good book, and when he was back on deck again Jimmie refused to chantey to the tune of "Whiskey," and his verses when singing a rope to "Molly Brown" were painfully proper.

Each night in the dog watch he insisted on reading from the Old Testament, starting at the very beginning. Jimmie had a pair of silver-rimmed spectacles, and to further his missionary work he changed bunks with Skouse, so that he could be directly under the lamp, while the delighted Skouse moved to the best bunk in the fo'c'sle right next to an open port.

When in the latitude of Capricorn we again picked up the S.E. Trades. Our storm canvas was once more stowed below, the big fair-weather foresail bent, and we settled down to another spell of tropic sea routine.

Tommy, one of the most consistent chronologists of the fo'c'sle, working by the brad-hole-and-peg method, using the stumps of burnt matches, pegged a hole around which he had scratched a circle.

"The 'dead horse' is worked off," announced Tommy, springing a surprise, as it had been a week or more since the subject was last mentioned in the fo'c'sle. And then, March 4th, three months had elapsed from that dreary morning when the *Fuller* put to sea.

"The boarding masters are smiling to-day."

"I bet the Front Street House has a good dinner for the boss to-day," ventured Frenchy.

A Sailor's Lot

"Yes, the lousy squeezers," continued Tommy; "they take in Australia and Mike and myself, when we jumped the *Etterick,* gives us rotten tucker, and stows the three of us in a garret for two days. Then we go down and sign and the next day out to sea in this bloody hell-wagon. A half a kit of dog's wool and okum slops, took from some dead sailors, maybe, and rotten oilskins and sea boots. A big bargain and all for eleven quid—that's all, only eleven quid from each of us, for a fine set of well-wearin' rags. And to-day they draws their hard-earned money, while all we have to do is ride down here on a yacht-in' toor around the Horn."

"It ain't right. It's hell, that's wot it is," piped up Joe.

"Nothing ain't right," added Australia, "and the sooner us fatheads learns it the better. You booze, I booze, we

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all booze, get regularly soaked, soused, and on wot? I ask on wot? Why, only a little licker that wouldn't harm nobody wot is used to it. We don't have nothing here for months — never touch a drop of licker. The first drink makes you feel good and one or two more and you take the shirt off your back for a dirty bum who lives off the like of us."

"Yes," added Tommy, "a year at sea and a week in port, and nothing to show for it. I quit right here, that's me. No more booze for Thomas Johnson."

In fact, we all made up our minds to work off no more "dead horses," and after a week, or perhaps another month, to work off the slop account with the skipper, the pay would start piling up at the rate of eighteen dollars per month, at that time standard wages out of the Port of New York for deep-water sailors.

None of the men had shaved for at least a month, and the crew forward presented a truly deep-water appearance. On the first Sunday of fair weather the amateur barbers got busy in both watches. Perhaps the effect of clean shaves and trimmed hair had something to do with the desire to have a field day; at any rate, two of the men, Frenchy of our watch and Old Smith of the starboard watch, went aft and got permission from the Mate to have a celebration. The next Wednesday was named, and as we were on the edge of the S.E. Trades the day broke fine. Accordingly after breakfast that morning the watch on deck, all but the helmsman, were allowed to go forward and assist in removing the contents of the fo'c'sle.

Green and blue sea chests with "tumble home" sides and canvas tops, worked with fancy fringes; plain canvas bags, bags with fancy eyelets and grommets, well-worn blankets, knobby straw mattresses, the "donkey's breakfast" of the sea, and all the humble furnishings of the fo'c'sle of a merchantman, were hauled out on deck in the light of day. The fore rigging, the bottoms of the upturned boats on the forward house, and the fo'c'sle head were littered with these things. The scuttle butt was cleaned out and re-charred. We then rigged the water spar and with a liberal supply of sand and canvas and ki-yi brooms we scrubbed our home until the place fairly radiated.

All doors and ports were left open to allow the fo'c'sle to dry out, and at noon both watches lunched together, "al fresco," under the shade of the fo'c'le. A hamper of chicken sandwiches, a case of cold beer, and a box of cigars would have delightfully rounded out our dinner of pork and pea soup. However, we were in a merry mood and the unaccustomed company of the starboard watch made the simple fare and weevily tack taste particularly good.

Better Treatment Aft

Besides, relations with the after guard were becoming more and more pleasant. By gradual stages, without in any way compromising their dignity, our experienced officers assumed a less harsh way of speaking, orders were mandatory to the last degree, but less liberally spiced with profanity, and an occasional joke on the part of those aft sent a ripple of laughter among the men pulling at sheet or halyards. The cook also felt the balmy influence of Pacific sunshine, and every other day we were delighted with a big pan of ginger bread in the fo'c'sle and duff with raisins in it on Sundays. Honolulu was drawing near. None of us had more than a few dollars of pay on the books, and crews among the island traders are hard to get, with pay correspondingly high. Perhaps this had something to do with the change of atmosphere. Even those who had the most reason to complain were beginning to cheer up and forget their troubles of the past.

A clean fo'c'sle, dry, well-aired bedding, and smiling skies ushered us into the region of equatorial rains. The flying fish began to zip through the air, often falling on deck in the night watches, and the daily thunderstorms came with their accustomed regularity. At about eight bells in the afternoon watch it would suddenly cloud over, any sails spread on deck in course of repair would be hastily dragged to the sail locker, and presto!—a rumble of thunder

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would follow the first faint flashes of lightning. Then several bright, jagged discharges would come in quick succession, a clap or two of Jove's artillery, and a douse of heavy rain followed by the golden rays of the sun streaming through such rainbows as are only seen in those latitudes.

When in the doldrums we were set to cleaning and painting overside, sitting on scaffold planks, our feet sometimes touching the water. One day there was a commotion under us as we worked away on a plank slung beneath the mizzen channels. A great black object rose out of the water, for all the world like a submarine boat coming to the surface. Our cries brought all hands to the ship's side. A huge whale had come up in the shadow of the ship. Some hands ran forward for the harpoon, but the Mate stopped them.

"You damned asses!" he cried. "Do you want to send us all to the bottom? That's a razorback. He'll ram us as quick as hell if we rile him."

The whale sank from sight as quickly as he appeared, and, razorback or not, we had no opportuniy to try his temper.

In the Lazy Latitudes

In after years when at sea on the decks of swiftly moving steamers, I often pondered over the sights that were given us of the abounding life in the deep, as we slowly worked our way across the ocean in the *Fuller*. From her low decks, when becalmed or when sailing along at from four to five knots in fine weather, especially in the tropics, the teeming life in the ocean depths was brought very close to us. Time and again we would lay out on the martingale to see if there was a pilot fish under the fore foot of the ship. As sure as there was, a piece of pork thrown overboard would "rise" a shark. The pilot fish is about two feet long, striped athwartship in dingy black and white, a sort of convict of the sea, the only friend and companion of the shark.

Whole flotillas of the dainty nautilus would sail by us for hours. These Portuguese men-o'-war, as sailors call them, spread a shell-like sail to the wind, pink and airy, gliding gaily before the gentle zephyrs of the line.

During a tropic storm at night just after leaving the trades we were roused out at midnight and ordered aloft to take in the t'gan's'ls, the yards and rigging were soaked with rain, and, as we got to the tops, St. Elmo's fires started to flicker on the yard arms with a pale blue light——

> "And sudden breaking on their raptured sight,
> Appeared the splendor of St. Elmo's light."

Jimmie Marshall, fear clutching at his heart, refused to mount the futtock shrouds, and, springing to the forward leg of the topmast backstay, he slid to the deck, while the rest of us went aloft. The stoutest of us were touched with superstitious feelings of awe. The "corposants," as the men called them, ushered in a lot of ghost stories during the night watches on deck. A few days after this we were becalmed in a dense fog bank such as is sometimes encountered in that region. Joe went aft to relieve the wheel just after hearing a gruesome tale, and a giant man out over the quarter reached for Joe when abreast the open door of the wheel house. Joe nearly fainted at the sight of his own shadow thrown by the naked binnacle light that the helmsman had just taken from the hood to trim.

One hundred and seven days out from New York we crossed the line for the second time. The grooming for port then started in grim earnest. Holystones were brought out, and the time-honored couplet of the sea—

> Six days shalt thou labor and do all that thou art able,
> And on the seventh holystone the deck and scrape the cable.

was a matter of fact on board the *Fuller*. Our knees became sore from the constant "praying." Some of the men rigged up cushion devices, stretching a piece of old canvas over a board upon which three cleets were nailed, affording some support for the knees and at the same time keeping them above the wet deck.

We worked in gangs, sawing away with the stones and wearing a scum of

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wood from the deck. Each man soon became jealous of the work done by his neighbors, and we were careful to keep all hands going, as there was a certain amount of deck to be gone over, and the sooner finished the better. From that time on to the landfall there was no more watch below in the afternoon, meaning a working day of sixteen hours on alternate days.

One boon that befell us at this time was the constant blowing of a strong northeast trade that we picked up just north of the line. There was more easting in the wind than is usually the case, and for a week at a time we cut through the water at a speed of close to ten knots, sailing with the wind almost abeam, the lee scuppers boiling just a foot or two above the water and every stitch of sail drawing to the best advantage.

"The Honolulu girls have us in tow," was the saying each day as the wind held on. No more exhilarating sport can be imagined than that of sailing a big, well-found ship. Given the right conditions of wind and weather, the vessel seems to thrill with life as she races along. Not a man in the crew had ever visited Honolulu before, and speculation was rife as to what sort of a place we were heading for. The monarchy had recently been overthrown in a bloodless revolution, and the days of the republic were in full flower.

When in 154 degrees of east longitude and 21 degrees north latitude, Captain Nichols hauled his wind and shaped a course direct for the northeast point of the Island of Molokai, the leper island of the Hawaiian group. We made the land just before nightfall, anchors were got over the bow ready for letting go in case of emergency, the "dipsea lead" was coiled in a tub on the cabin and the end passed forward into the chains, and the hand lead or "blue pigeon" was ready in the mizzen channels. All was excitement on board, the smell of the land came to us with increasing intensity as we ran past the north shore of Molokai and through the Kaiwi Strait separating this island from Oahu, upon the southern shore of which is situated the port of Honolulu.

At midnight we were abreast of Diamond Head, and the Captain wore ship, heading in toward the other side of the strait under easy canvas, the skysails, royals, and flying jib hanging in their gear. We tacked twice before daybreak in order to hold the weather gauge, and at the first streak of dawn the *Fuller* was again under all sail and a course shaped past Diamond Head for the entrance to Honolulu Harbor.

A whale boat put out with the pilot, followed by a small, wheezy tug. We paid a hawser over the bow to the Kanakas, and as we clewed up and hauled down, the ship slowly nosed her way past the reef and into the harbor. No wharf being ready, our anchor was let go, we squared yards, furled sail "With a harbor furl, boys," from the Mate, and the Captain rode ashore in the whaleboat of the pilot as we watched him with longing eyes from aloft.

Honolulu at Last

Below us stretched the most beautiful city in the world. Green palm trees, such as we had almost forgotten the existence of, met our hungry gaze. White walls and red-roofed houses lined away in streets and avenues. Native women in clean white dresses were walking about on the wharves ashore; we saw horses and carriages driving about, and we gazed at these sights like children.

At noon the Captain returned with a boatload of fresh provisions and the glad news, "Alongside at Brewer's Wharf tomorrow at daybreak."

We opened hatches that afternoon, sent down the mains'l, and cockbilled the main yard for a cargo boom. At six we pumped her out, and after a supper of fresh vegetable soup, fresh bread, and delicious ripe bananas, we lay down to slumbers such as only the angels can understand. We were one hundred and twenty days out from the port of New York, and our first night of unbroken sleep was ahead of us.

. . . . . .

But what a change a few years can make. The gleaming decks, the immaculate white paint, the shining black rigging, the new running gear and snowy

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canvas; all of these were destined soon to pass away. A mere memory of her former glory was to remain for the proud soul of that gallant ship, the fairest of the old California Clipper Line, upon whose white decks we were drilling off the long sea miles of her last unsmirched voyage under sail alone.

Upon her return to New York from this voyage the *Fuller* was fitted with a smudgy donkey engine to take the place of some more able sailor men. It was in Puget Sound that I set eyes upon her for the last time. I was second mate of the steamer *Texan;* we were filling our bunkers under the coal chutes at Tacoma preparatory to the first leg of the long passage home via Magellan. Always keen for a look at one of the old sailors, I brought my binoculars to bear on the spars and hull of a new arrival at anchor in the stream.

Something familiar about the craft held my attention as I scanned her point by point, running my glasses along the full length of her sheer. The wheel house; the gig, upturned on the cabin trunk; the bridge running forward to the gallows frame above the fife rail; the old familiar lines of the fo'c'sle head; and the forward house, the after part marred by a dirty stack; all were the same, the same but sadly out of tune. Aloft she fared not quite so well; her lower spars were painted "mast color," that sloppy invention of the steamboat sailor. The "doublings" still retained a trace of varnish, but topmasts and t'gallant masts were dull with smoky grease.

As for her yards, they were not square, and the skysail masts and yards were gone. When she swung with the tide I could make out in faded gilt across her stern, *A. J. Fuller*—New York.

That night I clambered over her rail, the kindly cloak of darkness hid her scarred deck upon whose sanctified planks we had spent such painful hours with brooms and holystones. The familiar sweep of her bulwarks, the looming form of the old Liverpool pump; the historic spot on the deck where the mates spilled the Dago's blood on that stirring day off the River Plate; all was the same. It seemed as though the shades of Frenchy, Brenden, Axel, and Old Smith, and all the rest of her company, should come up to greet me. The door under the break of the poop opened, as of old, and I was about to sing out, "Aye, aye, sir," and lay aloft to some sharp order from Mr. Zerk.

But times had changed. The Captain was ashore, and the two mates, good fellows after the fashion of their kind, welcomed me on board and we spent a pleasant hour yarning about the old ship. I was not the first of her tribe to return for a last glance at old scenes. When about to leave them I started forward toward the fo'c'sle. A strange voice was singing, and the air of a popular music hall ballad jarred on my ears from the direction of the fo'c'sle door. A lump rose in my throat with the memory of old Marshall and "Blow the man down," and I turned toward the ladder and tumbled over the side to my boat. The *Fuller* was then droghing lumber between Puget Sound and Australia, a trade in which the old ship may be to this day for all I know.

[THE END]

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BALLISTICS OF CARTRIDGES

By CHARLES NEWTON

V

SPORTING CARTRIDGES OF THE FOREIGN TYPE

OUR high power smokeless powder cartridges are almost entirely copied from ammunition first developed abroad. As before stated, these foreign cartridges were first brought out as military cartridges, then adapted to sporting use. The most popular of the foreign cartridges were the 7mm. and 8mm. sizes. Our Krag cartridge was designed much on the lines of the 8mm. as to charge and bullet, but slightly inferior all round; although it served to introduce to the sportsmen of this country the 8mm. used in the Mausers and Mannlichers of Europe, many of which were imported and placed on sale in this country about 1892 or 1893, and have met with an increasing demand since that time. The 7mm. Mauser cartridge was introduced, with more abruptness than ceremony, during the Spanish war, and in view of the influx of the captured Mausers obtained at that time and sold here, it acquired a measure of popularity, but never was it anything as popular as the 8mm. Both these cartridges being of the obsolete, heavy, blunt point bullet type, their ballistic properties would be uninteresting at this time, but in view of their present state of development, together with their positions as pioneers, we may let them head the list.

In the improvement of ammunition constantly taking place abroad there are two distinct centers, viz., Germany and England. These two centers proceed on radically different lines. In Germany the effort seems to have been largely concentrated upon improving the charge which is shot from the old 7mm. and 8mm. shells, which are still paramount in their respective calibers, and ammunition made twenty years ago will fit the latest model rifle of that caliber. In England the tendency has been to depart radically from the older models and obtain increased efficiency by increasing the powder capacity of the shell; and many and daring are the innovations thus developed.

With the 7mm. and 8mm. shells of two decades ago our German friends are now putting up loads with modern velocities and modern bullets, the efficiency of which seems remarkable, when we consider the size of the shell. As will be seen by the appended table, our Springfield service shell, wherein our ordnance department departed radically from the specifications of the older Krag shell, making it decidedly larger and adapting it to a bullet of comparatively light sectional density and consequently inferior ranging power, has actually less velocity and less striking energy than has the 7mm. cartridge, not only at the muzzle but increasingly so as the distance from the muzzle increases, owing to the better density of the 7mm. bullets.

In the appended table we have reproduced the ballistic table for the Springfield cartridge, as taken from the ordnance office handbook, that we may more conveniently compare the ballistics of the foreign cartridge with those given for this, the only modern American cartridge. Close observers will note that the time of flight and trajectory of this bullet do not exactly coincide with those of the others, owing to the use of a

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slightly different formula for computing trajectory, but this difference is negligible.

Following the table for the Springfield we have given one for a German 7mm. cartridge, then one for the same cartridge as loaded with full metal cased spitzer bullet by the U. M. C. Company. Maybe they will some day put this out in a soft point. We hope so, but until they do we must get the soft points from Mr. Reed.

The next table is for a German cartridge for the 8mm. rifle, using the original shell with full metal patched bullet of 154 grains weight and this is followed by one for a German soft point spitzer, weighing 146 grains and for the same shell.. We have no factory in America loading the 8mm. except with the old type blunt bullet as yet, but Mr. Reed has made some for the writer, weighing 170 grains and with sharp, soft points, which shoot finely, but chronograph reports of their velocity are not yet at hand, hence the ballistics will be given in the next article.

Ross and Two Jefferys

The next figures are for the .280 Ross, the .333 Jeffery and the .404 Jeffery, in the order named. The two first have sharp point expanding bullets of splendid lines and good weight, hence, as will be seen, they retain their velocity and energy well. The .404 Jeffery is a very powerful rifle, but uses a blunt point bullet and consequently loses speed and power rapidly.

The initial velocities upon which the tables for the different 7mm. and 8mm. cartridges are based were taken by chronograph, at the writer's request, by our large factories, hence are not "catalogue figures." For the balance we took the word of the factories producing the ammunition.

Comparing the 7mm. with the Springfield, we find that the 139 grain bullet has more power as well as velocity, at the muzzle and at all distances from that point. The German 7mm. bullet is heavier and has less velocity, but it has more power than the Springfield at 200 yards and beyond, while its trajectory at 300 yards and beyond is actually the flatter, owing to retaining its velocity better. Its greater weight of bullet also gives it an advantage in power over the 139-grain projectile at 300 yards and beyond.

The 8mm. bullets are even lighter, in proportion, than the Springfield, and consequently, while they decidedly outclass it in power as well as trajectory at all points up to and including 500 yards, hence are decidedly superior as hunting cartridges, yet at the extreme ranges the Springfield is more powerful. An 8mm. bullet, to have the same sectional density as the Springfield, should weigh 168 grains, hence the making of the 170 grain weight, yet to be chronographed. It will be interesting to know just what this quite popular caliber will do in the way of velocity and range when loaded with a bullet of proper weight. Some, like the writer, have been somewhat skeptical regarding the velocities said to be obtained by our German friends from these shells—hence the chronograph tests—but when we consider that with Ross powder the writer has obtained, from the 150 grain service bullet, shot from a Krag shell, the same velocity as obtained from the Springfield, and with 800 pounds less pressure, while Lieutenant Whelen has obtained this velocity with 1909 military powder at 2,000 pounds less pressure, it would seem to the uninitiated that the Springfield shell was too large, and that the velocities reported for the German shells were but the logical outcome of standing by our old friends.

No American rifles now being made for these foreign cartridges, a brief statement regarding the rifles might not be amiss.

The 7mm. and 8mm. cartridges are used almost entirely in Mauser and Mannlicher rifles, of different makes, and the 8mm. size is carried in stock by all New York dealers who handle foreign arms, and, in fact, by practically all large dealers in sporting goods. The 7mm. caliber, is, to the best of the writer's knowledge, carried regularly only by one dealer of that city, who represents the Mauser factory and who handles the German cartridges described.

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The Remington Company formerly made the Remington-Lee high power rifle to use these cartridges, but they long ago discontinued its manufacture. Why the 7mm. caliber has been no more popular in this country has long been a subject of speculation to the writer, as he admires it very much, particularly when comparing it, in its original blunt bullet form, with the 8mm. of similar type, and in view of the number of the captured Spanish Mausers sold in this country and to which it was adapted.

The Ross .280 cartridge is slightly more powerful than the regular 7mm. and 8mm. sizes. As will be seen by the table, it combines a high initial velocity with a reasonably heavy bullet of fine shape and with an expanding sharp point. Its price has been somewhat discouraging until the present year, but now it is regularly on sale here and the ammunition is manufactured here. The Ross rifle is of the "straight pull" type, so many of which have been from time to time placed upon the market and disappeared therefrom. The principal objection to this type seems to be occasional difficulty in extracting the fired shell when it happens to stick unduly. We are told that the latest model Ross has overcome this defect, but many sportsmen think highly of the manner in which the Mauser and Mannlicher type deals with such a situation. This cartridge is being extensively adapted to Mauser actions at present; a Mauser, by Jeffery, of England, using it has been on sale in New York for a considerable time. Practically every English gun factory produces a Mauser adapted to it, and it makes a splendid weapon, never failing to function properly, regardless of sticking shells.

Built for Heavy Work

The .333 Jeffery is in an entirely different class from those above described. It is intended for the heaviest work and seems capable of meeting the demand. The bullet is the longest and has the best carrying power of any known to the writer, and it is of the finest Spitzer shape, yet has an expanding point. It is undoubtedly the longest range sporting cartridge of any on the American market to-day. A glance at the table will show not only that it strikes a terrific blow at the muzzle, but that it retains its power splendidly during flight. It is a Mauser action with barrel and stock fitted by Jeffery & Co., of London. The larger diameter of the cartridges makes three the limit of capacity of the magazine, giving, with the one in the barrel, four shots at the command of the shooter. It weighs eight pounds, and while it is a man's gun, the recoil is not at all disagreeable, being pronouncedly less than the .405 Winchester. This is a splendid weapon for one who believes in hitting his game hard enough to knock it down and keep it down—who prefers his game dead on the spot to a beautiful blood trail to follow. It combines the powerful blow of the highest velocities with sufficient metal to drive deep and yet sufficient velocity to produce the explosive effect which makes the modern ammunition so deadly. It will be noticed that, while its initial velocity is 100 f. s. less than the Springfield, yet at 100 yards it is but 15 f. s. less, and at 200 yards it is 60 f. s. more. It has the speed to mushroom well and the weight to plant that mushroom where it will do the most good. We often read of a lion receiving the two bullets from a double .450 cordite rifle without being stopped in his charge. It would be interesting to note what would be the effect of one of these bullets upon Leo Rex. Its trajectory at 300 yards being but 1.7 inches higher than that of the Ross .280, and at 500 yards but 4.8 inch higher, it is suitable for long range shooting at antelope, and with its greater power it should be an ideal all around gun for African hunting.

The .404 Jeffery is a Mauser very closely resembling the .333, but the cartridge carries a 400 grain bullet with a blunt point. It is evidently made to take the place of the double .450s for hard work at close range. It strikes a terrific blow, almost equal to that of the .450, but its blunt point causes it to lose velocity very rapidly, so rapidly, in fact, that while it has 570 foot pounds more energy than the .333 at the muzzle, at 200 yards it has 30 foot pounds less.

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To the writer's mind this would be a much more efficient rifle were the bullet to weigh about 325 grains, with sharp point, and driven at the higher velocity which such modification would permit. It would give more energy, less recoil, and longer range, to say nothing of the greater deadliness of the blow inflicted.

PERFORMANCE OF THE CARTRIDGES AT VARIOUS RANGES

Range		U. S. Gov't 150 gr. C—.389	7mm Sp. Pt. 151.5 gr. C—.495	7mm Sp. Pt. 140 gr. C—.44	8mm Sp. Pt. 154 gr. C—.347	8mm Sp. Pt. 140 gr. C—.329	Ross .280 145 gr. C—.457	Jeffery .333 250 gr. C—.586	Jeffery .404 400 gr. C—.896
Muzzle	Velocity, ft. sec.	2700	2604	2784	2915	2998	3050	2600	2200
	Energy, ft. lbs.	2445	2310	2475	3018	2920	3002	3750	4320
100 yd.	Velocity, ft. sec.	2465	2425	2577	2646	2708	2837	2450	1997
	Energy, ft. lbs.	2034	1991	2057	2402	2394	2710	3270	3560
	Trajectory, ft.	.055	.058	.048	.046	.045	.042	.056	.082
	Time fl't, sec.	.116	.120	.110	.107	.106	.102	.118	.143
200 yd.	Velocity, ft. sec.	2244	2254	2378	2392	2437	2635	2304	1807
	Energy, ft. lbs.	1686	1718	1751	1956	1927	2247	2950	2920
	Trajectory, ft.	.241	.246	.217	.206	.199	.180	.238	.362
	Time fl't, sec.	.243	.248	.233	.227	.223	.212	.244	.301
300 yd.	Velocity, ft. sec.	2039	2089	2188	2151	2181	2441	2162	1631
	Energy, ft. lbs.	1392	1474	1473	1586	1548	1929	2600	2360
	Trajectory, ft.	.596	.593	.530	.515	.496	.436	.575	.906
	Time fl't, sec.	.384	.385	.364	.359	.352	.330	.379	.476
500 yd.	Velocity, ft. sec.	1668	1781	1832	1714	1718	2076	1893	1329
	Energy, ft. lbs.	932	1064	1029	1001	964	1392	2000	1572
	Trajectory, ft.	2.04	1.94	1.77	1.80	1.74	1.42	1.82	3.13
	Time fl't, sec.	.709	.697	.665	.672	.662	.597	.677	.884
1000 yd.	Velocity, ft. sec.	1068	1197	1175	1047	1032	1337	1340	965
	Energy, ft. lbs.	382	486	417	370	336	580	1000	832
	Trajectory, ft.	14.5	12.1	11.6	13.5	13.5	9.00	10.5	20.4
	Time fl't, sec.	1.86	1.74	1.70	1.84	1.84	1.50	1.62	2.26
1500 yd.	Velocity, ft. sec.	853	959	930	823	812	998	1037	790
	Energy, ft. lbs.	244	304	264	231	215	319	600	556
	Trajectory, ft.	52.8	39.9	39.9	48.2	49.6	32.0	35.3	63.0
	Time fl't, sec.	3.45	3.16	3.16	3.47	3.52	2.83	2.97	3.97

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THE TRAIL TO YESTERDAY

By CHARLES ALDEN SELTZER
Author of "The Two Gun Man," "The Coming of the Law," etc.

SYNOPSIS OF PREVIOUS CHAPTERS

MISS SHEILA LANGFORD, on her way to her father's ranch, loses her way, and night and storm come on. A stranger meets her and takes her to his shack. On learning her name, the stranger, who calls himself "Dakota," shows strong emotion. A preacher who has also lost his way comes to the shack, and Dakota forces Sheila to marry him under a threat of killing the preacher if she does not. Immediately afterwards she goes on to the ranch, where she learns from Duncan, the manager, that he suspects Dakota and Ben Doubler, an old man, of being cattle rustlers. Sheila sees Dakota shoot Blanca after a quarrel in which the latter is given first shot. Sheila is caught in quicksand while trying to ride her pony across a ford and is dragged out by Dakota. Sheila rides home on Dakota's pony, and when Duncan later returns the pony to Dakota the two men quarrel. Sheila meets Ben Doubler and her father goes to Dakota with an offer to the latter if he will get rid of Doubler. Dakota agrees to the proposal. Sheila learns of this bargain through Duncan and Duncan also warns Doubler of the plot to put him out of the way.

CHAPTER XII

A Meeting on the River Trail

ABOUT ten o'clock in the morning of a perfect day Sheila left the ranchhouse for a ride to the Two Forks to see Doubler. This new world into which she had come so hopefully had lately grown very lonesome. It had promised much and it gave very little. The country was not to blame for the state of her mind, though, she told herself as she rode over the browned, sun-scorched grass of the river trail—it was the people. They—even her father—seemed to hold aloof from her. Duncan's sister had discouraged her little advances toward a better acquaintance, betraying in many ways a disinclination toward those exchanges of confidences which are the delight of every woman.

Sheila had become aware very soon that there would be no hope of gaining her friendship, and so lately she had ceased her efforts. For Duncan himself she had developed a decided dislike. She had been able to see quite early in their acquaintance the defects in his character, and though she had played on his jealousy—in a spirit of fun—she had been careful to make him see that anything more than mere acquaintance was impossible. Doubler had been the only one who had betrayed any real friendship for her, and to him, in her lonesomeness, she turned, in spite of his warning.

Since the day when on the edge of the butte overlooking the river Duncan had voiced his suspicions that her father had planned with Dakota to remove Doubler, Sheila had felt more than ever the always widening gulf that separated her from her parent. Since the day he had become impatient with her when she had questioned him concerning his intentions toward the nester he had treated her in much the same manner that he had always treated her, though it seemed to her that there was something lacking; there was a certain strained civility in his manner—a veneer that smoothed over the breach of trust which his attitude that day had created.

Many times, watching her father, Sheila had wondered why she had not been able to peer through the mask of his imperturbability at the real, unlovely character it concealed. She tried to fight down the inevitable, growing estrangement, telling herself that she had been, and was, mistaken in her estimate of his character since that day when he had told her plainly not to meddle with his affairs, and she had almost succeeded in winning the fight when Duncan had

This story began in the June OUTING

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again destroyed her faith with the story of her father's visit to Dakota.

Duncan had added two and two, he had told her when furnishing her with the threads out of which he had constructed the fabric of his suspicions, and she was compelled to acknowledge that they seemed sufficiently strong. Contemplation of the situation, however, had convinced her that Dakota was partly to blame, and her anger against him—greatly softened since the rescue at the quicksand crossing—flamed out again.

Two weeks had passed since Duncan had announced his suspicions, and they had been two weeks of constant worry and dread to her. Unable to stand the suspense longer, she had finally decided to seek out Dakota to confirm Duncan's story, and to plead with him to withhold his hand. First she would see Doubler.

The task was not to her liking, but she compromised with her conscience by telling herself that she owed it to herself to prevent the murder of Doubler—that if the nester should be killed with her in possession of the plan for his taking off, and able to lift a hand in protest, she would be as guilty as her father or Dakota.

As she rode she could not help contrasting Dakota's character with those of her father and Duncan. She eliminated Duncan immediately, as being not strong enough to compare either favorably or unfavorably with either her father or Dakota. And much against her will, she was compelled to admit that, with all his shortcomings, Dakota made a better figure than her father. But in her bitterness she assured herself that there was nothing attractive in either. Both had wronged her—Dakota deliberately and maliciously; her father had placed the bar of a cold civility between them; she could no longer go to him with her confidences; she had lost his friendship; he had lost her respect.

Lately she had speculated much over Dakota. That day at the quicksand crossing he had seemed to be much different from the Dakota who had forced her to marry him. For one thing, she was no longer afraid of him; he had really done her no serious injury beyond that which might be undone through the simple process of going to the law, and in his manner on the day of the rescue there had been much respect, in spite of the mocking levity with which he had met her reproaches.

She had reached a point about a mile from Doubler's cabin and was riding along the crest of a ridge, when a sudden sound caused her to halt her pony. The sound was strangely like a pistol shot, though louder, she decided, as she listened to it reverberating in the adjacent hills. It died away, and she sat for a long time on the ridge, listening, but no other sound disturbed the perfect quiet of the morning. Therefore, convinced that Doubler must have been trying out his rifle, she urged her pony forward, riding down the slope of the ridge to the level of the river trail.

Fifteen minutes later, still holding the river trail, she saw a horseman approaching, and long before he came near enough for her to distinguish his features she knew the rider for Dakota. He was sitting carelessly in the saddle, one leg thrown over the pommel, smoking a cigarette, and when he saw her he threw the latter away, doffed his broad hat, and smiled gravely at her.

"Were you shooting?" she questioned, aware that this was an odd greeting, but slightly worried for Doubler.

"I reckon it must have been Doubler," he said. "I've just left him, and he was cleaning his rifle." He gazed whimsically at her. "I thought you'd be riding the river trail again," he added.

"Why?" she questioned.

"Well, for one thing, there's a certain fascination about a place where one has been close to death—I expect when we've been in such a place we like to come back to see just how near we came to cashing in. And another thing—you forgot to thank me for pulling you out."

There was in his eyes and voice the same subtle mockery that had marked his manner that other time, and as before she felt a deep resentment. Mingled with the resentment, however, was the bitterness that had settled over her within the last few days. It found expression in her voice when she answered him.

"This country is full of—of savages!"

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"Indians, I reckon you mean?" he drawled hatefully, and regarded her with a mild smile.

"I mean white savages!" she declared spitefully.

He had no reply to make to this and sat studying her face. The silence grew painful; she caught him watching her and her face colored. Then he spoke quietly.

"You been seeing white savages?"

"Yes!"

"Not around here?" The hateful mockery of that drawl!

"I am talking to one," she said, her eyes blazing with impotent anger.

"That ain't exactly the way to talk to your——" he hesitated and smiled oddly, apparently aware that he had made a mistake. He hastened to repair it—"your rescuer," he laughed.

However, she saw through the artifice and the bitterness and her voice grew more pronounced. "It is needless for you to remind me of our—our relations. I am not likely to forget."

"You ain't told your father?" In his voice was the quiet scorn that she had detected when he had spoken of her father on that other occasion at the crossing. It mystified her, and yet lately she had felt this scorn herself and knew that it was not remarkable. Undoubtedly he, having had much experience with men, had been able to see through Langford's mask and knew him for what he was. For the first time in her life she experienced a sensation of embarrassed guilt over hearing her name linked with Langford's, and she looked defiantly at Dakota.

"I have not told him," she said; "I won't tell him—I told you that before. And he is not my father; my real father died a long while ago, and Langford is only my stepfather."

A sudden moisture was in her eyes and so she did not see him start; did not observe the slight pallor that spread over his face; failed to detect the queer light in his eyes. However, she heard his voice, sharp and filled with astonishment.

"Your stepfather!" He had spurred his pony beside hers and, looking up, she saw that his face had grown suddenly stern and grim. "Why didn't you tell me that before?" he demanded half angrily. "Why didn't you tell me when—the night I married you?"

"Would it have made any difference to you?" she said bitterly. "Does it make any difference now? You have treated me like a savage; you are treating me like a savage now. I—I haven't any friends at all," she continued, her voice breaking slightly, as she suddenly realized her entire helplessness before the combined evilness of Duncan, her father, and the man who sat on his pony beside her. A sob shook her, and her hands went to her face, covering her eyes.

"I know what Duncan's friendship amounts to," said Dakota harshly. "But ain't your father your friend?"

"My friend?" she echoed his words with a hopeless intonation that brought straight lines to the lips of Dakota. "I don't know what has come over him," she continued, looking up, her eyes filled with wonder for the sudden sympathy that she felt and saw in his manner and voice. "He has changed since he came out here; he is so selfish and heartless."

"What's he been doing?" She did not detect the repressed anger in his voice.

"Don't you know?" she said scornfully, certain that he was mocking her again—for how could his interest be genuine? Was he not a party to the scheme to kill Doubler? Yet perhaps not—maybe Duncan *had* been lying. Determined to get to the bottom of the question as quickly as possible, Sheila continued rapidly, her scorn giving way to eagerness. "Don't you know?" And this time the question was almost a plea. "What did father visit you for? Wasn't it about Doubler? Didn't he hire you to—to kill him?"

She saw his lips tighten, his face grow pale, his eyes flash with some mysterious emotion, and she knew in an instant that he was guilty—guilty as her father!

"Oh!" she said, and the scorn came suddenly into her voice. "Then it is true—you and my father have conspired to murder an inoffensive old man! You—you cowards!"

He winced as though he had received an unexpected blow in the face, but almost immediately he smiled — a hard, cold, sneering smile that chilled her.

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"Who has been telling you this?" The question came slowly, evenly, without the slightest trace of excitement.

"Duncan told me."

"Duncan." There was much contempt in his voice. "Not your father?"

She shook her head negatively, wondering at his composure.

He laughed quietly. "So that's the reason Doubler was so friendly to his rifle this morning. Kept it right by his side. Must have heard from someone that I was gunning for him."

"Then you haven't been hired to kill him?"

He smiled at her eagerness, but spoke gravely. "Miss Sheila," he said, "there ain't money enough in this country to hire me to kill Doubler." His lips curled with a quiet sarcasm. "You're like some other people out here," he added. "Because I put Blanca away they think I'm a professional gun-man. But I want you to understand that there wasn't any other way to deal with Blanca—by coming back here after selling me that stolen stock he forced me to kill him. I know I look pretty black to you, because I treated you like I did. But that was my idea—and something else. I've found something out since—I've got my eyes open."

Their ponies were very close together now, and, leaning over suddenly, he placed both hands on Sheila's shoulders and gazed straight into her eyes, his own flashing with a strange light. "I've treated you mean, ma'am," he said, "about as mean as a man could treat a woman. I'm sorry. I want you to believe that. And maybe some day—when this business is over—you'll understand."

"This business?" Sheila drew back and looked at him wonderingly. "Why, what do you mean?"

He laughed and dropped his hands to his sides, again clothing himself with that mocking reserve which she could not penetrate. Apparently he would let her no farther into the mystery whose existence his words had betrayed. He had allowed her to get a glimpse of his inner self; had shown her that he was not the despicable creature she had thought him; had apparently been about to take her into his confidence; and she had felt a growing sympathy for him; had been prepared to meet him halfway in an effort to settle their differences, but she saw that the opportunity was gone—was hidden under the cloak of mystery which had been about him from the beginning.

"This Doubler business," he answered, and she nibbled impatiently at her lips, knowing that he had meant something else.

"That's evasion," she said, looking straight at him.

"Is it?" In his unwavering eyes she saw a glint of grim humor. "Well, that's the answer. But I am not going to kill Doubler—if that will do you any good."

"Then," she said eagerly, catching at the hope that he held out to her, "father didn't hire you to kill him?"

His lips curled. "Why don't you ask your father about that?"

The sudden hope died within her. Dakota's words and manner implied that her father had tried to employ him to make way with the nester, but that he had refused. She had not been wrong; Duncan had not been wrong when he had told her that her father was planning the death of the nester. Duncan's only mistake was in including Dakota in the scheme. She had hoped against hope that she might discover that Duncan had been wrong altogether; that she had done her father an injury in believing him to be capable of deliberately planning a murder.

She looked again at Dakota. There was no mistaking his earnestness; there was no evidence of guilt in his face, nor in the eyes that were watching her steadily. She put her hands to her face and shuddered, now thoroughly convinced of her father's guilt, feeling a sudden repugnance for him; for everybody and everything in the country, except Doubler.

She had done all she could, however, to prevent them killing Doubler, and she turned from Dakota, dry eyed and pale, urging her pony up the trail toward the nester's cabin, leaving Dakota sitting silent in his saddle, watching her.

She lingered long on the trail, riding slowly, halting when she came to a spot from where she could get a particularly

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fine view of the country, for in spite of her lonesomeness she could not help appreciating the beauty of the land, with its towering mountains, its blue sky, its vast, yawning distances; the peacefulness that seemed to be everywhere but in her heart.

She reached the Two Forks presently and urged her pony through the shallow water of the crossing, riding up the slight intervening slope and upon a stretch of plain beside a timber grove. A little later she reached the corral gates, dismounted and hitched her pony to a rail, smiling to herself as she thought of how surprised Doubler would be to see her. Then she left the corral gate and stole softly around a corner of the cabin, determined to steal upon Doubler unawares. Once at the corner she peered around. Doubler was lying in the open doorway, his body twisted into a peculiarly odd position, face down, his arms outstretched, his legs doubled under him.

CHAPTER XIII

A Shot in the Back

FOR an instant after discovering Doubler lying in the doorway Sheila stood motionless at the corner of the cabin, looking down wonderingly at him. Then she saw a moist red patch on his shirt on the right side just below the shoulder blade, and it seemed that a band of steel had been pressed down over her forehead. The world reeled, her knees sagged, and she held tightly to the corner of the cabin for support. She saw it all now—Dakota had been to visit Doubler; he had shot him; she had heard the shot. Duncan had been right, and Dakota—how she despised him now!—might even now be picturing in his imagination the scene of her alone with the dead man. An anger against him arose at the thought and did much to help her regain control of herself.

She must be brave now, for there might still be life in Doubler's body, and she went toward him, cringing and shrinking, along the wall of the cabin.

She touched him first, lightly, with the tips of her fingers, calling softly to him in a quavering voice. Becoming more bold, she took hold of him by the left shoulder and shook him slightly, and her heart seemed to leap within her when a faint groan came from his lips. Her fear fled instantly as she realized that he was alive and, stifling a quivering sob, she tried to turn him so that she might see his face. She saw the red patch grow larger at the effort, and convinced that she must persist she shut her eyes and tugged desperately at him, finally succeeding in turning him over. He groaned again, though his face was white and lifelsss, and she redoubled her efforts and after a while succeeded in dragging him inside, out of the sun.

Panting and exhausted, she leaned against one of the door jambs, thinking rapidly. She ought to have help, of course, and her thoughts went to Dakota, riding away on the river trail, but she could not go to him for assistance, of course. Something must be done for Doubler at once; she must render him whatever aid she could until she could manage some way to get other help. But she dreaded the idea of touching him again, and stood for a long time at the door, watching him. Then, her courage returning, she again approached him. She found a sheath knife in one of his pockets, and with this she cut the shirt away from the wound, discovering, when she drew the pieces away, that the bullet had gone clear through him, though she thought it had missed the lung entirely, seeming to be rather high up on the shoulder.

She got some water from a pail that stood just inside the door, and with this —and some white cloth that she tore from one of her skirts—she bathed and bandaged the wound and laid a wet cloth on his forehead. She tried to force some of the water down his throat, but he could not swallow, lying there with closed eyes and his breath coughing in his throat.

After she had worked with him for a quarter of an hour or more she stood up, convinced that she had done all she could for him and that the next move would be to get a doctor. She had heard Duncan say that it was fifty miles to Dry Bottom, and she knew it was forty to Lazette. And she supposed

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there was no doctor nearer. Of course, she would have to go to Lazette—ten miles would make a difference. She might ride to the Double R ranchhouse, but that was at least ten miles out of her way and she might as well go to Dry Bottom. She drew a deep breath over the contemplation of the long ride—at best it would take her three hours—but she did not hesitate long and with a glance at Doubler she was out of the door and to the corral, where she unhitched her pony, mounted, and sent the animal over the level toward the shallow crossing at a gallop.

Once over the crossing and on the river trail where the riding was better, she held the pony to an even, steady pace. One mile—two miles—five and six she rode, with her hair flying in the breeze, her cheeks pale, except for a red spot in the center of each — which showed her impatience—and a resolute gleam in her eyes. The pony was fresh and did not seem to mind the pace, cavorting and lunging up the rises and pulling hard on the reins on the levels, but she held it in, realizing that during the forty-mile ride the animal would have plenty of opportunity to prove its mettle.

She reached and passed the quicksand crossing, the pony running with the sure regularity of a machine, and was on a level that led into some hills ahead, when the pony stumbled. She tried to jerk it erect with the reins, but in spite of the effort she felt it sink under her, and with a sensation of dismay clutching at her heart she dismounted and raised its head. The animal's right fore leg was deep in the sand of the trail, and Sheila knew instantly that it had stepped into a gopher hole. It took her some time to extricate the pony, for the leg had sunk deep into the sand, and when she finally dug a space around with a branch of a tree that she procured from a grove beside the trail the animal struggled out, only to limp badly. The leg, Sheila decided, after an examination, was not broken, but badly strained, and she knew enough about horses to see that the pony would never be able to make the trip to Lazette.

She would be forced to go to the Double R now, there was nothing else she could do. But while she stood beside the pony, wondering whether she had not better walk than try to ride him, she heard a clatter of hoofs and saw Dakota riding the trail toward her. He was traveling in the same direction as she and apparently had strayed from the trail back somewhere in the distance, or she would have seen him. His first words showed that he had. He drew up beside her and looked at her with a smile, and she, aware of his guilt, wondered at his composure.

"You're in an awful hurry," he said. "I was down at a crossing back a piece. watering my horse, when I saw you tearing by. What's wrong?"

"You ought to know that," she said bitterly, angry because of his pretended serenity, "you—you murderer!"

His face paled instantly, but his voice was clear and even. "Murderer?" he said sternly. "Who is murdered?"

"You don't know, of course," she said scornfully. "You shot him and then let me ride right on to find him. Oh!" She shuddered at the recollection, held her hand over her eyes for an instant to keep from looking at the expression of amazement in his eyes, and while she stood thus she heard a movement, withdrew the hand from her eyes and saw him standing beside her, cringed and cried with pain as he seized her arm.

"Stop this fooling and tell me what has happened!" he said gruffly. "Who has been murdered?"

Oh, it was admirable acting, she told herself as she tore away from him and stood back a little, her eyes flashing with scorn and horror. "You don't know, of course," she flared. "You shot him—shot him in the back and left me to find him. But he isn't dead, thank God, and will live, if I can get a doctor, to accuse you!"

She pointed a finger at him, but he ignored it and took a step toward her, his eyes hard and cold.

"Who?" he demanded. "Who?"

"Ben Doubler. Oh!" she cried in an excess of rage and horror, "to think that I should have to tell you!"

But if he heard her last words he paid no attention to them, for he was suddenly at his pony's side, buckling the

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cinches. "He ain't dead then," he said rapidly, sharply, the words coming with short, metallic snaps. "And you were going to Lazette for the doctor. I'm glad I happened along; glad I saw you. I'll be able to make better time than you."

"Where are you going?" she demanded. She took a step and seized his pony's bridle-rein, her eyes aflame with anger over the thought that he should attempt to deceive her with so bald a ruse.

"For the doctor," he said shortly. "This is no time for melodrama, ma'am, if Doubler is hurt badly. Will you please let go of that bridle?"

"Do you think," she demanded, her cheeks aflame, her loosened hair straggling over her temples, where it had been blown during her wild ride, "that I am going to let you go—you!"

"This isn't a case where your feelings should be considered, ma'am," he said. "If Ben Doubler has been hurt like you think he has, I'm going to get the doctor mighty sudden!"

"You won't!" she declared, stamping a foot furiously. "You shot him and now you want to disarm suspicion by going after the doctor for him. But you won't. I won't let you!"

"You'll have to," he said rapidly. "The doctor isn't at Lazette; he's over on Carrizo Creek, taking care of Dave Moreland's wife—who's down bad. I saw Dave yesterday—he was telling me about her; that the doctor was to stay there until she was out of danger. You don't know where Moreland's place is. Be sensible now," he said gruffly.

"You sha'n't go!" she persisted.

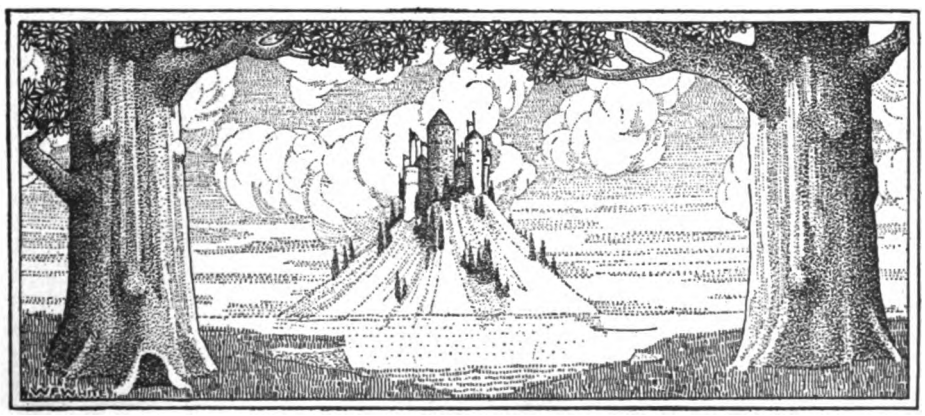
For answer he swung down from the saddle, seized her by the waist, disengaged her hands from the bridle-rein, and picking her up bodily carried her, struggling and fighting, to the side of the trail and set her down, still holding her arms, pinning them to her sides. When he tried to leave her she grasped at him, seizing the collar of his vest. With a grim laugh he slipped out of the garment, leaving it dangling in her hand.

"Keep it for me, ma'am," he said with a laugh. "But go back to Doubler's cabin and do what you can for him. I'll be back with the doctor before sundown."

In an instant he was at his pony's side, mounting with the animal at a run, and in a brief second had vanished around a turn, leaving a cloud of dust to mark the spot where he had gone.

(*To be continued*)

"Trouble," by Walter Myers, is a whimsical story of odd adventure—in November OUTING



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THE FLYING BOAT

By AUGUSTUS POST

ILLUSTRATED WITH PHOTOGRAPHS

THE flying boat is the latest word in aviation. The builders claim for it the highest development of use and safety so far obtained. It seems to point the way for the future and to assure the permanence of aviation as a sport and as a useful art. Most significant of all, the navies of the world are taking it up in all seriousness as a valuable adjunct. Mr. Post sums up the knowledge of the flying boat acquired through the season just closing, and presents the arguments in its behalf.

THERE are three words often confused and often used interchangeably that must be clearly distinguished before one can speak intelligently of the new, almost revolutionary development in mechanical flight. They are "hydroplane," "hydroaeroplane," and "flying boat." The hydroplane is a high-power motor boat, made so as to skim over the surface of the water at an extremely high rate of speed. The hydroaeroplane is a standard aeroplane fitted with floats so constructed that it can light upon, rise from, and skim over the surface of the water as well. The flying boat is a seaworthy motor boat hull, with spray hood and cockpit for passengers, to which is added planes and rudders, so that besides doing all a motor boat can do, it can also fly at great speed and rise to great heights in the air.

Roughly speaking, the hydroaeroplane is an aeroplane that can float; the flying boat is a motor boat that can fly. The English prefer to call the hydroaeroplane a "waterplane," but though this does get rid of two syllables in a clumsy word, it could as well be used for the hydroplane, which is a boat that does not get into the air at all.

Almost as soon as men began to fly in aeroplanes they began to try to rise from and alight on the water. The reason for this was the self-evident one that there was a safe and suitable place for experimentation. Professor Langley, the "Father of Aviation in America," whose memory a repentant world has just honored, made his first experiments with models sent off from the deck of a houseboat, over the waters of the Potomac, realizing that he had here a large, unobstructed area, and that it would be a simple matter to make the light models alight safely on the surface of the water. How wise this was showed in the outcome of the unfortunate but epoch-making flight of his man-carrying machine, for the aviator, Mr. Charles M. Manley, would unquestionably have been killed had he been dumped anywhere but into the Potomac.

The first French experiments to attain marked success began over water as well; Bleriot and Gastambied experimented over the Seine, towing by a fast motor boat a kite-like glider, built on the model of the later successful machines, and steered and controlled by a man riding upon it. On one of the lakes of Austria William Kress, also one of the pioneers of European aviation, made his first experiments, and here in America the Aerial Experiment Association, headed by Dr. Alexander Graham Bell, and celebrated as the aerial nursery of Glenn Curtiss, carried on its first flying-machine tests over Lake Keuka, near

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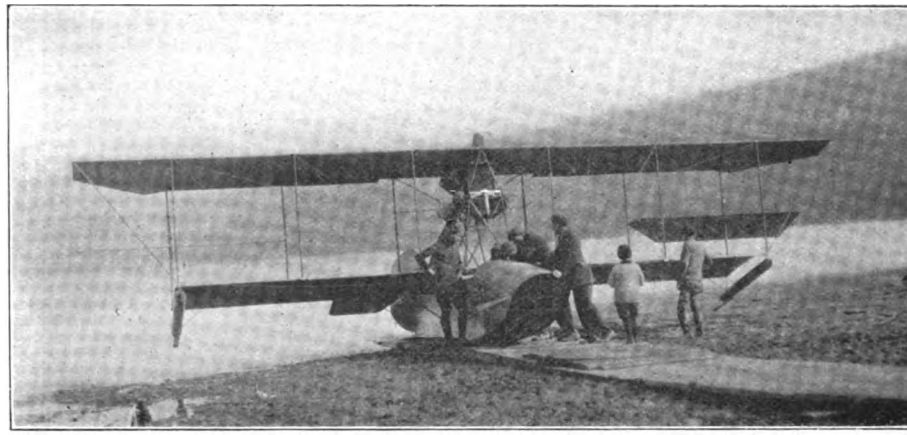
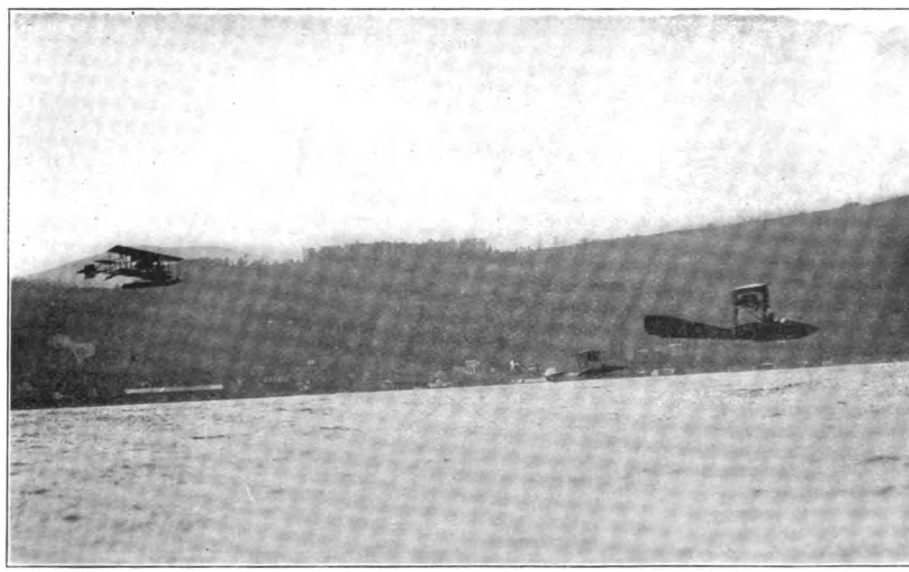


MAKING A LANDING ON SHORE

Hammondsport—though, to be sure, it was frozen at the time.

One of the first problems to engage the attention of Mr. Curtiss after the ice melted was to make his biplane, which he had mounted for the purpose upon a catamaran, rise from the surface of the open water, but in this he was hampered by the fact that at this time, which was very early in the development of aviation, his motor was not yet powerful enough. So he put the subject one side until the motor should be further developed. Again, later in 1909, at the time of the Hudson-Fulton flight from Albany to New York, the possibility of having to light on the waters of the Hudson made him take up the water problem again, this time to devise a method of alighting safely and keep the machine afloat on the surface—a problem that he solved by means of cylindrical floats attached to the machine.

The matter rested there for more than half a year, until a suitable time and place offered, which occurred during the winter two years ago at San



THREE NEW BOATS IN FULL FLIGHT

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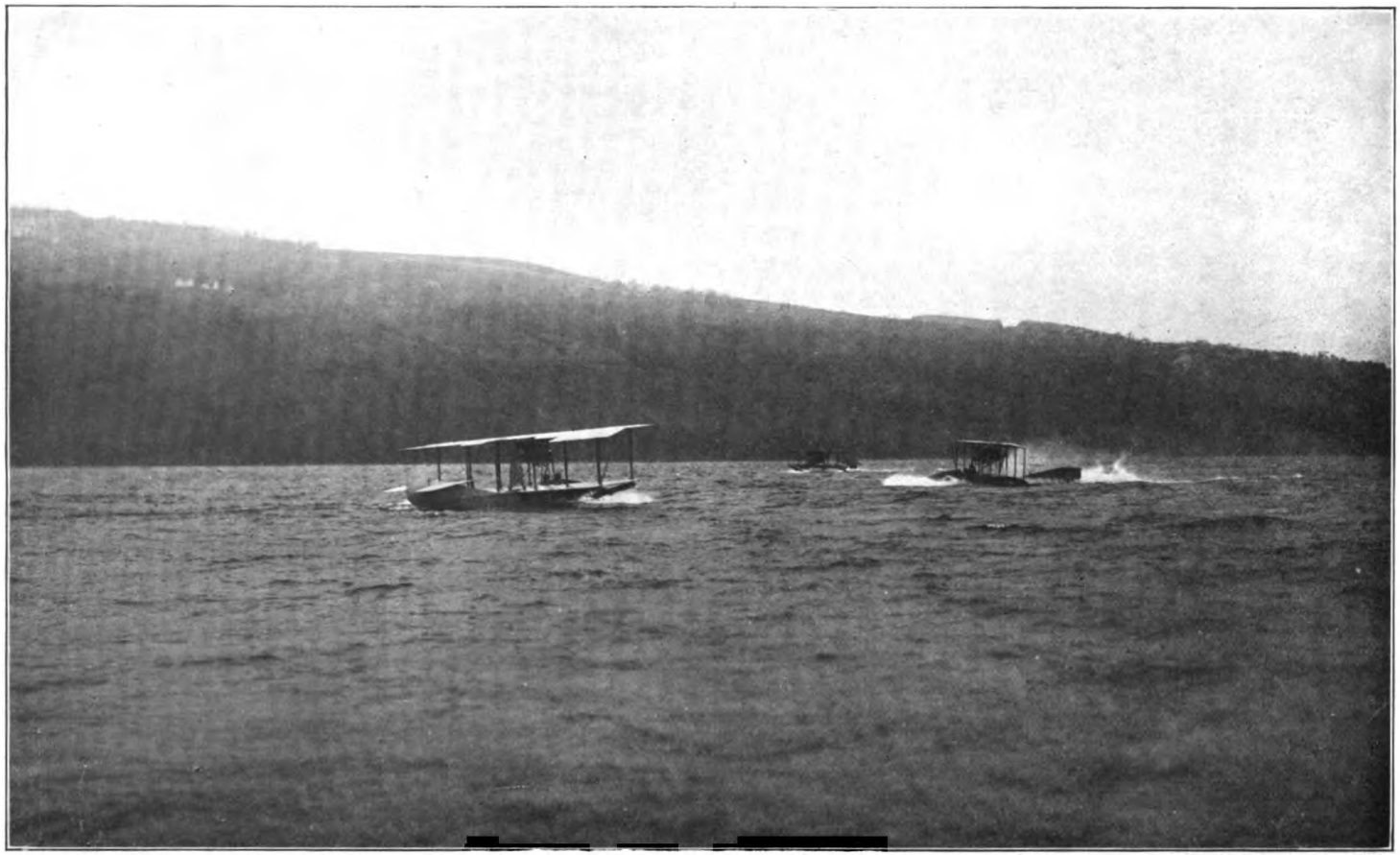

GIVING AN IMITATION OF REAL BOATS

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Diego, California, an ideal spot to attack the long-cherished task again. This time Mr. Curtiss combined the two catamarans into one flat-bottomed pontoon with a scow-shaped bow, and placed it under the machine, equipped the whole with his most powerful motor, and successfully evolved the first hydroaeroplane.

The next step in its development came when the machines were used for exhibition purposes, and the aviators exploiting them pushed their possibilities to the limit, so that they had often to go through very high seas, and it was clearly seen that a more seaworthy craft was needed for operation in surf or storm, or upon the ocean. The machine now began to change along lines of increased efficiency and comfort. To cut down head-resistance the passengers were placed in the body of the pontoon, which was developed into the hull of a motor boat and given something approaching the fineness of its lines.

When the hydroaeroplane first came out, before its later developments had begun to take shape, foreign makers were very quick to appreciate its advantages and copy its construction. Almost all foreign makes were equipped with floats, and the type was quickly brought to a high stage of perfection. How high may be inferred from the rigorous conditions of the tests at Monaco, which competing hydroaeroplanes fulfilled. Stationed on the water, it had to start (the motor set in motion) and fly a distance of 100 meters marked out between two buoys; leave the surface of the water, ascend to a height of 500 meters, and descend in less than thirty minutes; leave the surface, rise to at least 100 meters, shut off the engine, and return to the water; be attached by the pilot to a towboat and towed over 100 meters and make a complete tour of the four-mile course, under its own power, without leaving the water. To these preliminary tests all competing hydros submitted. Landing as easily as the hydroaeroplane does, even in high surf, the Mediterranean and the British Channel have no longer any terrors for the aerial navigator.

The differences between types of hydroaeroplanes are practically only those that exist between the corresponding types of aeroplanes to which flotation devices have been added, though perhaps the most conspicuous of the foreign makes are the Nieuport and Deperdussin hydromonoplanes, and the Breguet, Farman, and Astra hydrobiplanes.

Meantime the development, in America, of the pontoon in the direction of a boat hull had been steadily going on, and Mr. Curtiss had produced his second innovation, a fully equipped boat with flying attachment. In claiming both these types for America, it is to be remembered that various successful and semi-successful experiments had been made along these lines abroad, notably those by Captain Ferber, but the actual achievement stands to the credit of Glenn Curtiss. Already the flying-boat has assumed the proportions of a pleasure craft, carrying four passengers and possessing all the qualities of a high speed motor boat, with the added advantage that if the water grows monotonous it can sweep into the air, or if the pleasures of one lake be exhausted it can jump over a mountain range, look for another, and settle in that. It can be maneuvered at a speed of 25 miles an hour with ease on the surface of the water, and by speeding up skims over the tops of the waves like a hydroplane at 50 miles an hour, while by elevating the controls it rises and flies 60 miles an hour. Already it is becoming very popular with amateur sportsmen, and the list of owners is growing daily longer and socially more impressive. In this matter, as in the hydroaeroplane, Europe was quick to follow suit, but though there are several variations made abroad, the type has not had time to ingratiate itself there, as has its elder brother, the hydroaeroplane, although the influence of naval requirements, demanding as they do that machines shall be, above all, seaworthy, will necessitate development in boat-hull construction. All navies of any importance have now secured this equipment; the United States in particular, which has certainly never erred on the side of reckless encouragement of aviation, has purchased flying boats of the Curtiss and Burgess types,

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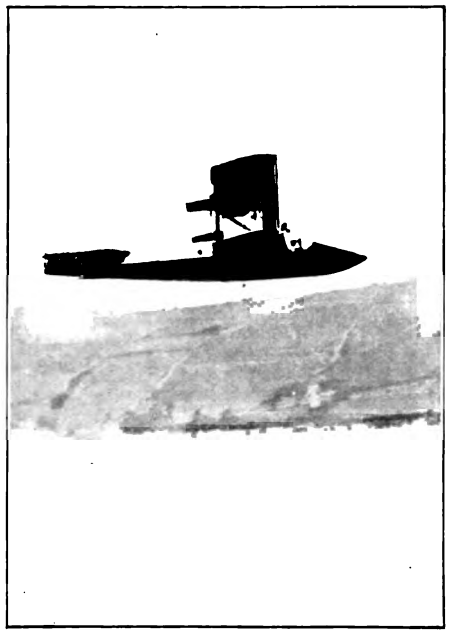

A CLOSE VIEW IN FULL FLIGHT

and the authorities of the Navy predict a brilliant future for this type of craft.

The highest mark that constructors of sea-going air boats must reach was set by the French Government in the competition held at Deauville late last summer under the auspices of the Ministry of Marine, which purchased from the competing machines the two it deemed most suitable for its needs, paying respectively twelve and ten thousand dollars. To compete at all, the machines, which must have been built in France by a French constructor or company, must seat both pilot and passenger, the latter to have a downward field of view on to the sea extending to 15 degrees radius from the vertical. Aluminum can be used only for such parts as have no strain whatever upon them; even then they must be covered with a special preparation preserving them from corrosion. This includes the crank-case.

The engine must be capable of being started by pilot or passenger, and there must be an absolutely automatic fuel supply. Special precautions are prescribed against short-circuiting—to qualify for government purchase control—levers and steering wheels must be anti-magnetic, and the magneto must be in a water-tight casing. The weight of pilot and passenger must be brought up to 176 pounds, by sand or load ballast (food, water, etc.), and each machine must carry liquid compass, revolution counter, speed indicator, barograph, map-holder of specified size, naval binoculars, anchor of at least 121 pounds weight, and a 130-foot cable, besides four hours' fuel.

At the half-hour trial flight from the water the minimum speed must be not less than 52 miles an hour, after which it must alight on the water, anchor at a depth of five fathoms, describe a figure eight around two buoys a quarter of a mile apart, go around a rectangular course with a diagonal of at least a mile in a 22-mile an hour wind, and in such a wind remain floating for ten minutes with engine stopped. As a final sea-going test, the machine must be moored from the tail with the wind behind, and then cut free to turn head to wind, left to its own devices. If during any of these trials it capsizes or comes to grief it is disqualified. Then, with a sea running in 3-foot waves, machines under full load must rise from the water, alight on it, and rise again; then be moored to their anchors and left an

TRAVELING ON THE LAND

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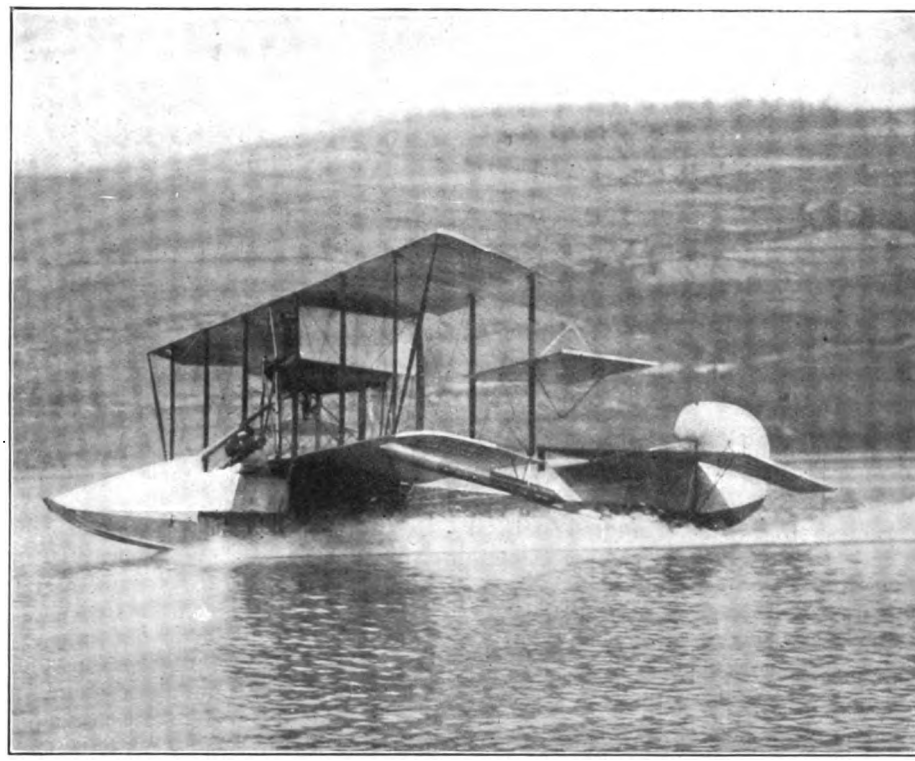
hour, and if then found leaking, they will be disqualified. In a calm, machines under full load must rise within a quarter of a mile, and get to an altitude of 1,640 feet in less than twenty-five minutes.

Only machines fulfilling these tests are allowed to compete for prizes of $20,000 for starting from rough sea, speed, varying speeds (two trips at highest and two at lowest rate), endurance, starting and dismantling, and assembling and alighting from a warship. If anything were needed to remove the naval aeroplane at once and forever from the class of "toys" in the mind of the citizen, it would be reading these very businesslike requirements made—and met—by a nation that is nothing if not severely practical, especially in the matter of spending money.

Our own government, while it has no such naval requirements, is in the market for three military scout aeroplanes of any type that will meet the severe requirements specified. They are especially interesting in the matter of armament; the machine, which must have an enclosed body, must protect both aviators and engine with chrome steel armor, about .075 inches thick, subject to the Ordnance Department penetration test for small arm fire before being put on the aeroplane. There must be the customary instruments and radio-equipment, the radio apparatus to be of a special design furnished by the Signal Corps. It must carry two people, each to have a large field of observation, either to be able to use the control.



SHOWING HOW THE BOAT RIDES THE SURFACE OF THE WATER

Besides four hours' fuel, instruments and equipment, the machine must carry a live load of 450 pounds to at least 2,000 feet in ten minutes. When arranged for transportation by road, its width must not be more than 10 feet, and six men should be able to assemble it for flight within an hour. The engine must be so arranged that one person can make a flight without another assisting.

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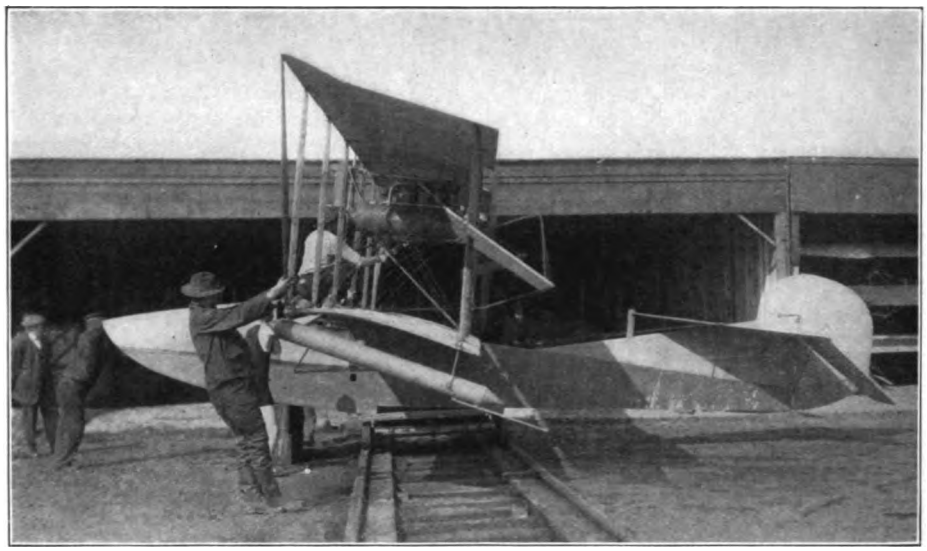

GETTING HER OUT OF THE SHED FOR A FLIGHT

The minimum speed must be not more than 38 miles per hour, the maximum not less than 55; it must fly from harrowed ground and tall grass within 100 yards; fly for four hours, part of which is an 180-mile non-stop cross-country flight; must show that it can glide safely, and demonstrate its system of control by executing a figure eight within a rectangle 500 by 250 yards, without decreasing its altitude more than 100 feet upon the completion of the figure. While not absolutely required, if a machine should have an effective silencer, an engine that could be started from within the central body, or a good stabilizing device, and if it should make an actual flight in a 20-mile wind without damage to machine, it would rate it much higher with the board.

The best showing that the cross-country, rough-and-ready water-air boat has yet made was in the Great Lakes Reliability Cruise from Chicago to Detroit, this summer, whose winner, Beckwith Havens, in a Curtiss flying boat, reached the Detroit Motor Boat Club only one day late, in spite of the fact that very stormy weather kept him on shore four days. The total running time was less than fifteen hours for the entire distance, there was no accident worth mentioning, and the owner, J. B. R. Verplanck, was on board, making the trip for pleasure. The untoward weather that kept back the flying boats was a series of the very worst thunderstorms that have been known in the lake region, but even one of these could not stop the winning craft.

Leaving Bay City with a tempest brewing, they flew above it, cut off entirely from sight of earth, seeing below them only rolling clouds and lightning flashes, above them only the blazing sun. With nothing to see but the sun and the sky, there was nothing to indicate that the boat was moving, except the hum of the motor as they went a mile a minute. All at once this stopped, and Havens, telling the story afterwards, said that he knew it meant a plunge through the storm with a dead engine.

"We went down into that black blanket as though shot out of a gun," he said in the Detroit *Free Press*. "Lightning flashed all about us—it was just as though we were making a submarine trip." But they dropped through the crashing storm, saw they were over water, and "came down beautifully."

One flight has been made in a Benoist flying boat down the Mississippi-Missouri River, 1,900 miles from Omaha to New Orleans, under conditions and with results that prove its most practical value for further using these natural roadways.

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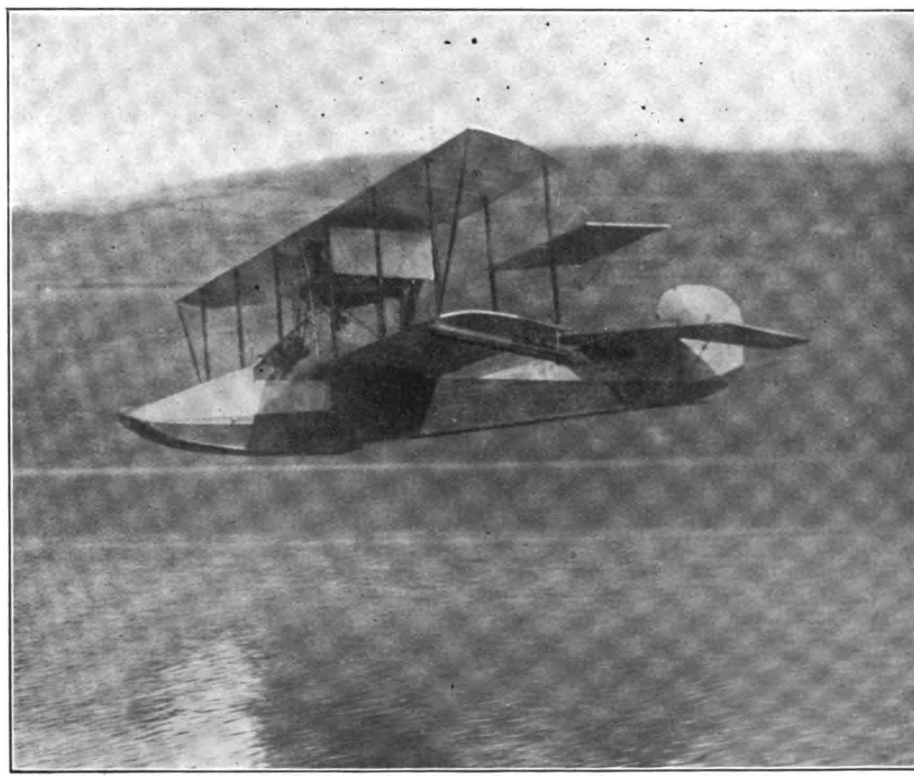
As to the operation of this flying boat: Its hull is like the modern hydroplane of the flat-bottomed boat, with sometimes one, sometimes two steps and a high free board. The bow is usually scow-shaped or square, with a gradual curve aft. The spray hood that covers the exposed part of the bow forms the upper deck, while the hull tapers to a sharp stern post. To this the rudders are attached, one like that of an ordinary boat, vertical and turning to right and left for the purpose of steering in those directions, but in addition to its lower portion, submerged in the water, its upper portion, containing by far the greater area, acts on the air when in flight. The second rudder is horizontal, used to steer up and down when the craft is in the air. This one is often made in two halves, called flippers—the resemblance makes the name plain at once—one of which is placed on each side of the vertical rudder.

Over the midship portion of the boat are attached the curved planes, 30 to 40 feet wide and 5 to 6 feet deep. In the biplane type one plane is placed above the other at about the same distance as their depth, usually some six feet. The pilot and passengers sit in the cockpit usually just in front of these planes, and the pilot wheel, in front of the pilot's seat, turns like the wheel of a motor boat or automobile to steer to left and right, but in addition can be moved forward or back to steer down or up.

One feature of the new craft which will interest the "old salt" is the method of balancing the ship, not by rolling barrels of sand from one side to the other, or shifting bags of gravel, as I well remember doing on the catboats of my youthful days, but by means of small movable planes on the end of each side of the main planes, like air rudders to steer the low side up and the high side down when the craft rocks too far over or shows danger of capsizing. Just this balancing is the chief fascination of the art of air yachtsmanship, meaning as it does a constant delicate adjustment.



PITCHING DOWN TO THE SURFACE OF THE WATER

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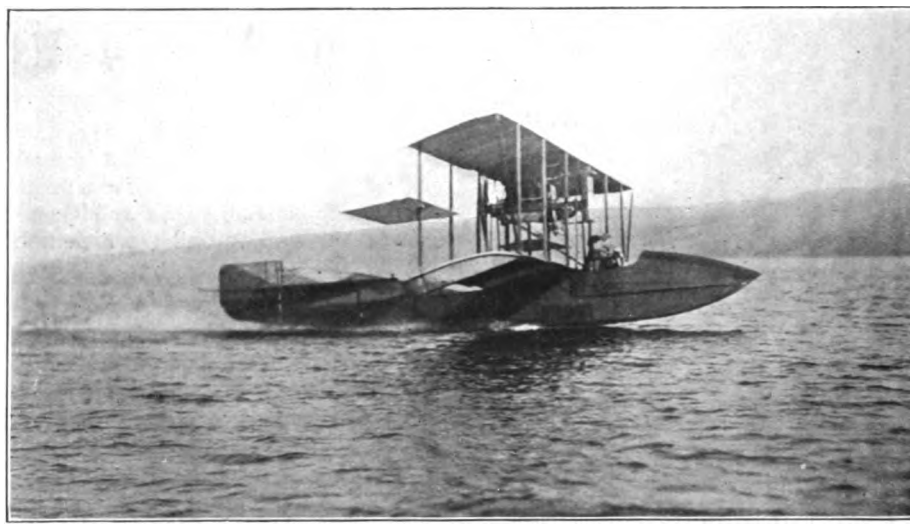
That there is a real art of managing a flying boat, and that it is one from which practically all the elements of dare-devil danger have been eliminated, is no doubt the reason for the growing popularity of the type among wealthy sportsmen, a fact to which I have already alluded. When the former owner of the *Dixie IV* goes in for a "flying yacht" instead of his champion motor boat, it means something. In this case it means, among other things, that he exchanges a boat with a speed of 46 miles an hour for one of 65 miles.



JUST RISING FOR AN AIR FLIGHT

William E. Scripps, Commodore of the Detroit Motor Boat Club and owner of the Detroit *News* and *News-Tribune,* as he says, "gave up motor boat racing two years ago; too dangerous for the amount of fun there is in it"—and now for a year and more he has been flying a Burgess hydroaeroplane, taking hundreds of flights during the past twelve months and carrying many passengers. The type of flying-boatman that is being evolved is of a vastly different kind from the dare-devil death-chasers of the early days of amateur aviation.

Another cruise on the same lines as the Great Lakes contest is that for which entries closed on July 16th, with a full list of contestants. This is the Around-England Cruise, for a prize of $25,000 offered by the London *Daily Mail* for a 1,600 mile trip around England. After much trouble with the government restrictions against flying over certain parts of British territory—restrictions to which it stubbornly adhered for some time in the face of the fact that the competition was open only to British machines, and hence would not conflict with the precautions now being taken in all European countries against aerial espionage—twelve stops were designated, not to be counted in the maximum time of seventy-two hours for the flight.

The contest permits pilot or passenger—one of whom must be carried—to be exchanged along the route, for this is declared to be not a test of human endurance, but of the powers of endurance possessed by the machine. But both human and mechanical endurance are tested to the utmost by the great projected flight for which all these cruises are but preliminary flutters. This is the most tremendous achievement still remaining to aerial navigation, the crossing of the Atlantic Ocean by aeroplane, for which Lord Northcliffe, of the *Daily Mail,* has offered a prize of $50,000.

It may as well be said at once that there is nothing chimerical about this idea. The *Mail* offers prizes with the full intention of having them won; $118,250 of the full amount of $188,250

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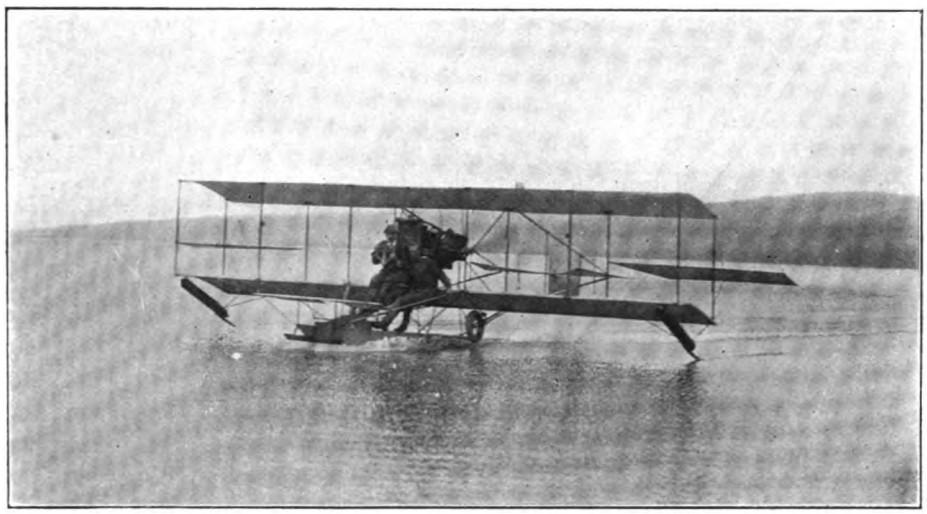
offered has been already awarded. The London-Manchester flight prize was offered November 17, 1906, and was won by Paulhan April 28, 1910, and this in spite of the fact that when the offer was made scarcely anyone in England out of the inner circles of the profession even took it seriously, or at most believed its accomplishment would be more than a matter of the far remote future. The Channel flight prize of $5,000 was offered May 10, 1910, and was won by Bleriot July 26, 1911. Now the Channel has been crossed several score of times, and the latest trick is to go over to luncheon and back, as an aviator just did to visit his brother. The little space of 150 miles that won Paulhan $50,000 fades before the daily records of flyers all over the world—3,200 miles in one continuous flight, as Brindejouc des Moulinais made from Paris to St. Petersburg and return via Stockholm and Copenhagen in one month and one day.

Progress is made by setting a mark and then reaching up to it; the mere formulation in words, and fixing with actual money rewards, a vision that has been only an aspiration in the minds of men is the first step toward giving that vision concrete expression. Any problem that the mind of man can clearly, definitely formulate, the hand of man can in time execute. Lord Northcliffe's offer will be won, there is no doubt about that, and though with true sportsman's sense he has not fixed a time limit, indications point to a likelihood that the first actual attempt will soon be made.

While looking into the future it is well to notice the important and significant development that has attended water-air-craft in the direction of size, weight-carrying, and endurance. Progress must be made along these lines if the aeroplane is to leave forever the class of personal amusements and enter upon its course as a world-factor in the new aerial age. Already to meet the requirements of the Atlantic flight—or, rather, to afford the margin of reserve power that such an enterprise demands, for the present powers of the flying-boat, as now constructed, have been demonstrated sufficient to fulfil the actual demands of the Atlantic flight—hydroaerocraft are being built on a larger scale. One in England has 800 h.p., while one in France, 78 feet wide, has two 200-h.p. Chenu motors. One has already carried six passengers, and the new flying-boat now being built for Henri Deutsch de la Meurth will carry eight. The French Collieux machine is declared to weigh 9,460 pounds net. In fact, there is no reasonable limit in sight as to size, while as for endurance, some European aeroplane motors have been run fifty hours



THE PONTOON TYPE SHOWING DIFFERENCES IN CONSTRUCTION

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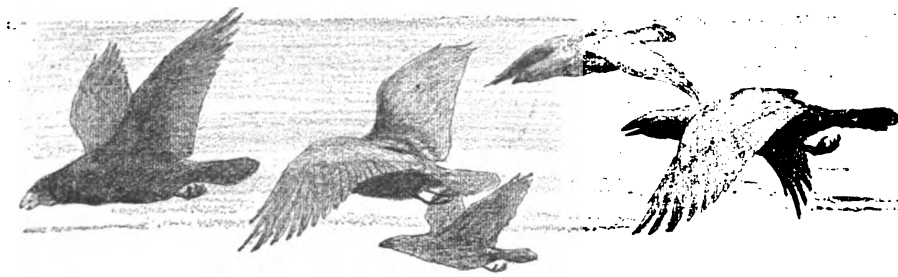
continuously, and some American aeromotors for forty hours in observed tests.

One reason for the rapid development of this type in size and endurance is the far greater safety enjoyed by the operator and the greater opportunity this affords to experiment toward its perfection. As the first aviation experiments were made over water to insure safety to the fragile models, so now the aeroplane returns to an over-water phase, for greater safety to the aviator. Not only does water afford a uniform surface where winds are usually steady, but in case of accident, a fall seldom means more than a ducking, while fatalities in hydrocraft are very rare.

This at once opens a new and almost unlimited range of usefulness, and has indeed made the aeroplane once more a commercial possibility, after a period when the public, thoroughly sobered by the many fatalities, withdrew, in America, at least, from its encouragement of aviation. In time of war the flying-boat is invaluable to the navy in directing artillery fire; for the army, besides the duties of a regular scouting air-machine that are the commonplaces of actual warfare abroad, it is an ideal blockade runner and makes a living link between army and navy. All that communication means to progress, the safe, swift, air-water boat, so far immune from terrestrial fire, means to war.

In exploration its uses are even greater. A recent Arctic expedition has taken along two flying boats, and these are also being considered for the expedition now being fitted up to explore the northern parts of Canada. Remembering my own experience, lost in the woods of Upper Canada, when the balloon *America* landed there after its record trip—remembering how we had to swim and wade as much as to walk; remembering, too, the lay of the land as it appeared from the balloon, I can testify that only an air-machine that is as useful on the water would solve the problem of advance-scouting in that forest-and-lake section. The Hudson's Bay Company is now negotiating for flying-boats to carry on mail service to distant points in the Hudson Bay district—so far distant that the Christmas mail now reaches them in March of the following year. By this method the time would be reduced to a few days.

As for life-saving from wrecks, or for service in time of flood or disaster, the peculiar fitness of the machine but needs one spectacular demonstration to endear it to the public heart. For the attitude of the public to the aeroplane has always been less one of liking than of a certain fearful fascination, turning sometimes to actual fear as the instrument for the death of so many pioneers of progress. But when the same invention shall begin to save lives—as it soon will do—then the public, that has so long given it the tribute of admiration, will award it the meed of affection.



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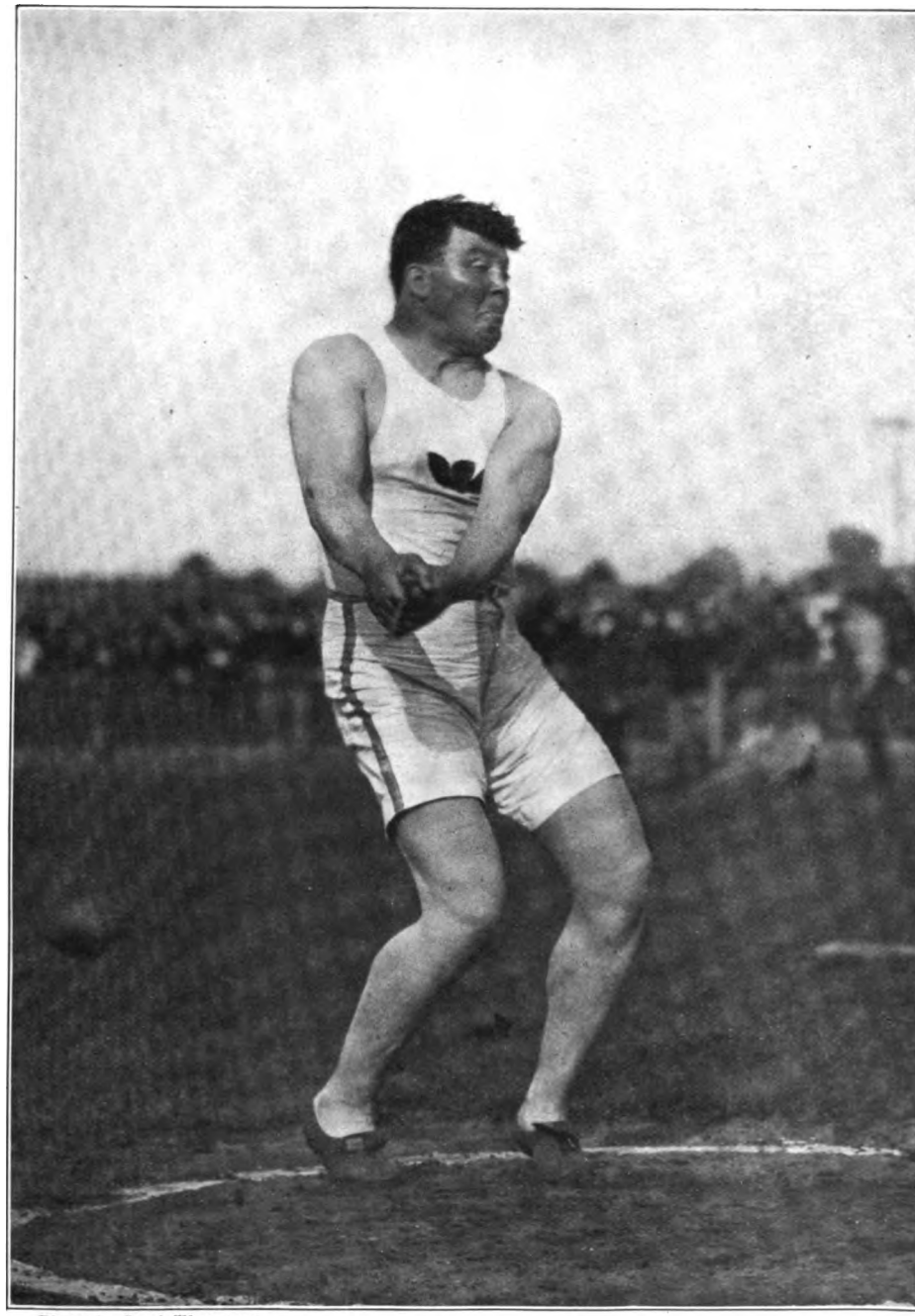

Photo by Paul Thompson

THE NEW HAMMER CHAMPION

When Pat Ryan, of the Irish-American Athletic Club, New York, threw the 16-pound hammer 189 feet 6½ inches on August 17, he set a new world's record, wiping out the previous mark set by Matt McGrath, the 1912 Olympic champion, by nearly two feet.

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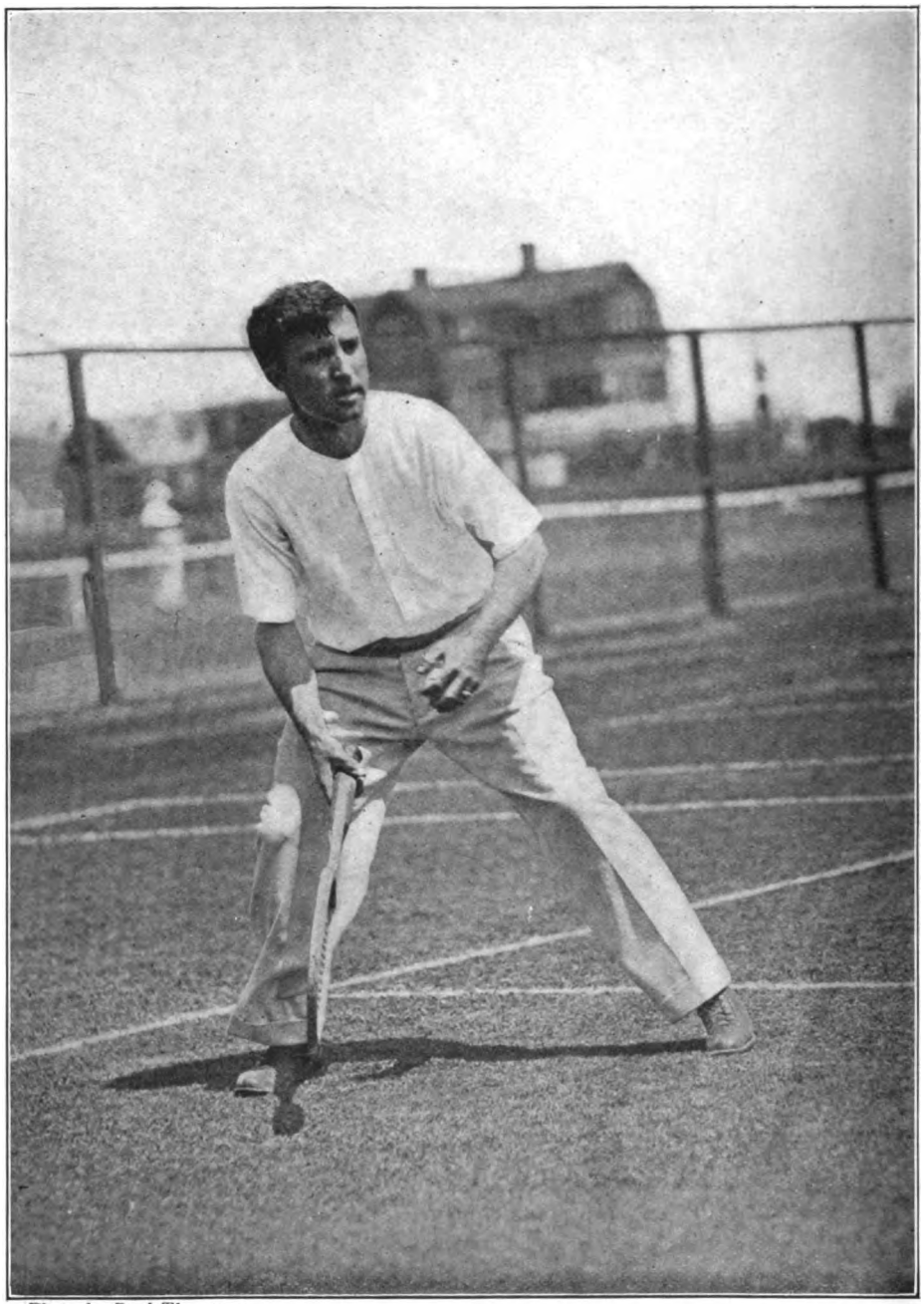

Photo by Paul Thompson

ONE OF THE NATIONAL DOUBLES CHAMPIONS IN TENNIS

Thomas C. Bundy, playing with Maurice E. McLoughlin, successfully defended the doubles title this year, playing in the finals against John Strachan and Clarence Griffin, winners of the Pacific Coast, Western, and sectional championships. Mr. Bundy's play is remarkable for its steadiness and resourcefulness. He lacks the speed that makes the other California players so showy on the courts, but he makes effective use of the chop stroke with heady variations in pace.

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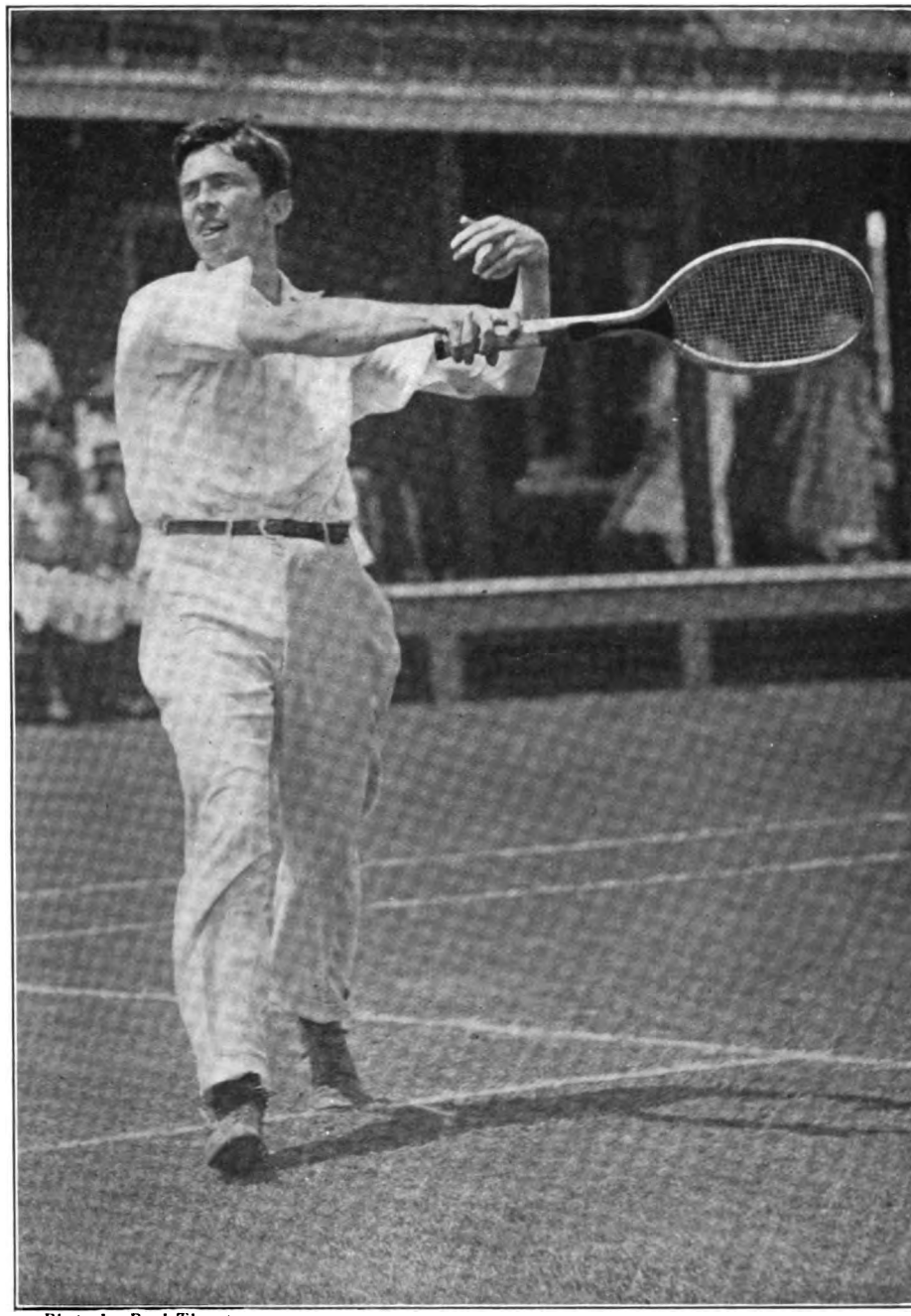

Photo by Paul Thompson

TWICE A TENNIS CHAMPION

Rounding out his sterling performances of the year, Maurice E. McLoughlin successfully defended his national title at Newport in August. In the seven matches played he lost only one set in the finals, to Williams. This is the first year the holder has played through, W. A. Larned failing to defend last year. Mr. McLoughlin is also holder of the doubles championship with Thomas C. Bundy, whose picture appears on another page.

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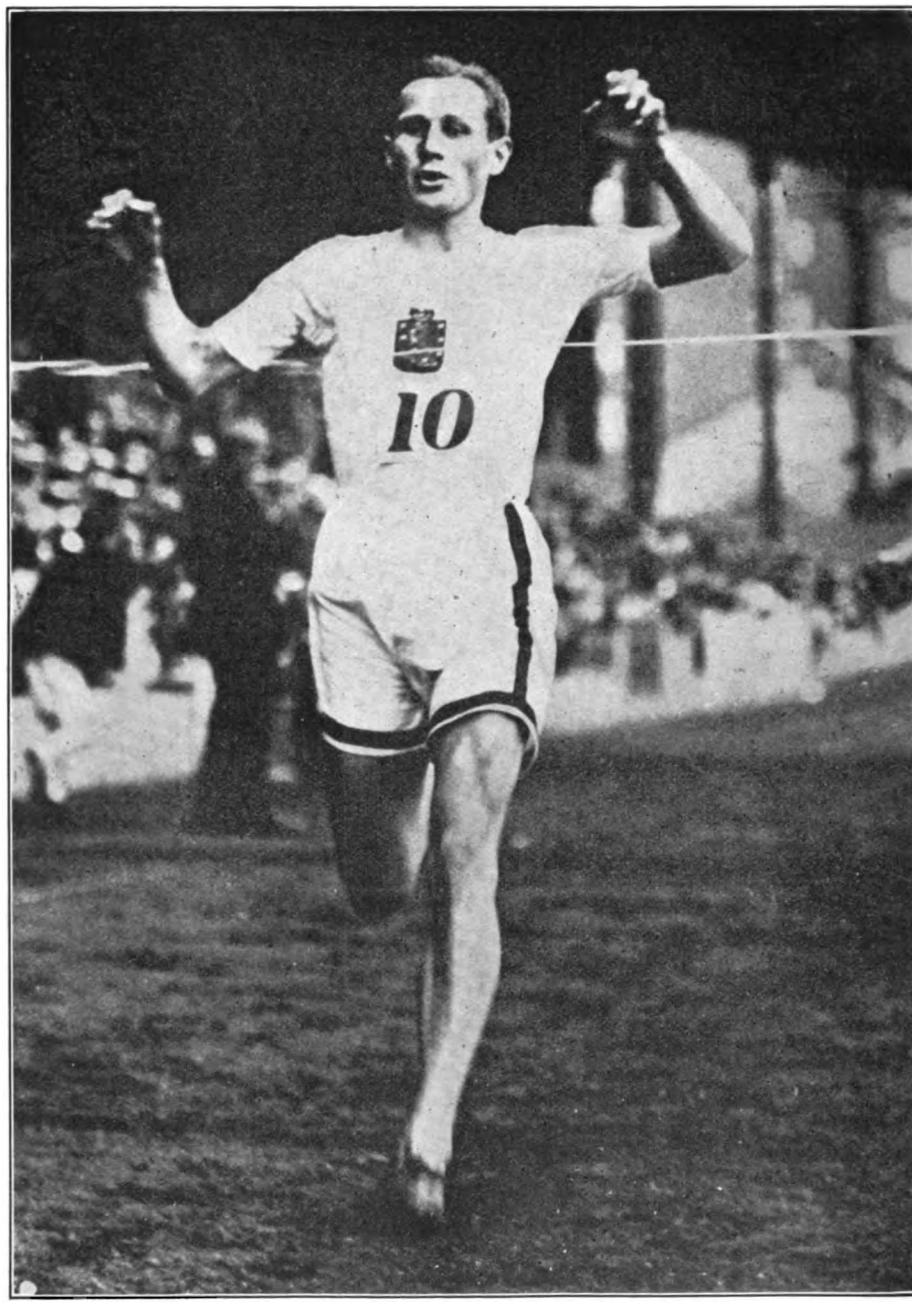

Photo by Paul Thompson

A SPEEDY FINLANDER

Hannes Kolehmainen, late of Finland, now a resident in the United States, has annexed the three-mile record formerly held by George Bonhag, going the distance in 14 minutes 32 seconds, 9⅗ seconds better than Bonhag's time. Kolehmainen was one of the sensations at Stockholm last year, where he won the 5,000 meters, the 10,000 meters, the 8,000 meters cross-country, and the first heat of the team race. Since coming to this country he has won numerous events, including a new record for the five miles indoor and a defeat of a relay team of five men for the five miles.

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ME HITCHED SHORT AND THE BOSS ON A LONG ROPE

TUGGING THE TOBOGGAN

By SCOUT B. GILMAN

PHOTOGRAPHS BY C. L. GILMAN

Some Impressions from the Business End of the Drag Rope

GIVE me glare ice and a collar that fits and I don't care how heavily you load the toboggan. The claws, pads, and hair-mats with which my feet are shod simply won't slip, and so long as that flat sled is fairly slick underneath, tugging any load is just an amusing business of running on a piece and then sitting down and watching over my shoulder the funny efforts of the Boss to catch up.

Were this all of hauling, any yellow *annymoosh* could do it. But glare ice don't usually last for more than one trip, and after it comes snow and more snow to make one wish for longer legs or one of these here "how-to books" to tip off a system for beating the game.

The Boss and I were awful ignorant when we took up with this style of transportation, and we don't know much about it yet. If anything, I'm a shade ignoranter than the Boss, because he's found and read some dope about toboggans and harness, while nothing I've run across gives me any really helpful suggestions about tugging.

Sure, I've studied that story by Mr. Jack London a whole lot. But I don't believe any amount of clubbing would make me such a super-husky as that Buck dog of his. Besides, the Boss is a pretty soft citizen when it comes to beating me up—and an awful gol-durn tough one when any other man offers to do it.

When the Boss began studying pictures of Alaskan dog teams in the magazines I never tumbled. Even when he sewed up a collar out of a gunny sack and fitted it close around my shoulders I paid little attention. I just thought it another of the kid tricks he's always playing when he hung his contrivance of rope and burlap on me and made it fast by a surcingle of old suspender straps.

You'd better believe I was the sur-

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prisedest pup in northern Minnesota when I started to follow him and found the toboggan following me.

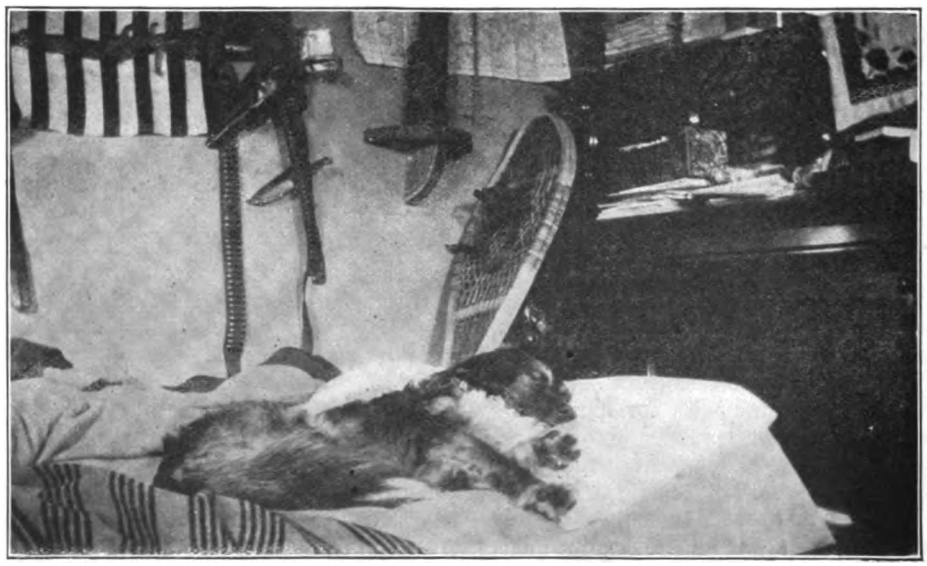
Maybe "scared" is the truer word. Anyhow, in my bolt to lose the thing, we all got mixed up on the trail and the air was just full of snow and pipes and snowshoes and sleds and words and Bosses and dogs.

THE LADY PRAISED MY WORK

And I tried it about forty times over again — only the Boss was wise and waiting to wrap his hand around my tail and fetch me up standing. In fact, it wasn't until he began breaking trail through deep snow for me the next winter that I got it through my ivory that it was me to trudge between the tails of his webs—and be blame glad that I was there instead of drowned in the drifts ahead.

Really, our whole education in this business was most accidental. The Boss didn't expect me to do actual hauling when he patched up that harness, but just thought being tied to the toboggan would keep me away from the poisoned wolf baits with which the woods were polluted.

It's rather beside the subject, but I did manage to gobble one pill and the Boss spent a whole morning sitting on me, prying my mouth open, and choking me to make me swallow butter balls with tobacco in 'em. I didn't like it a little bit and pretty near chewed his thumbs off, besides tearing another man's pants. The Boss



WHEN WE GOT HOME I FLOPPED ON THE BED

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must have taken the hint, for the next time he was fixed to give me the treatment I much perfer—a shot of appomorphine from the hypodermic.

While we were building our shack the Boss had to make a fifteen-mile round trip for supplies about twice a week. He'd tie the toboggan behind me and I'd take it into town empty, and then he'd haul home the load. Pretty quick he got to throwing his snowshoes on the toboggan when we struck stretches where he didn't need 'em, and before long I was dragging the mail and our rifle and his mackinaw—when he'd got all het up holding the pace I set.

I must say the Boss was pretty decent. When I'd crowd up and hog the trail just because I wanted to run beside rather than behind him, he'd let me have the beaten way and come kicking along on his webs, making all sorts of encouraging and amusing remarks—mostly profane.

Getting the Hard Work

We were not long in finding that we did a poor job of picking out that toboggan. She was eight feet long, seventeen inches wide, weighed twenty pounds, and had a lot of cast-iron brackets to support a big cotton rope that ran around the edge so folks could hang on sliding downhill. Those brackets didn't last long, for I generally managed to bust one off in the brush every trip.

Still, though it was big enough to load three times what the both of us could pull, it didn't come in bad at the start. There was a week when the Boss and I did nothing but haul lumber, one hundred feet at a time, from the shack we were tearing down to the shack we were building. It was right for this sort of work, and we certainly were glad that it was a big one when it came to moving the cook stove and the piano.

All this was right in the shank of the winter, and I'd hardly had time to get proud of my job before I lost it. But you can bet I remembered and knew what it meant when the old machine came down from the loft next fall and was loaded with The Right Person's duffle and a lot of rabbits and partridges she'd collected. I just passed up lunch and stuck with the toboggan, so that the Boss took the hint and searched out my old harness.

If you could have heard all the praise the lady passed out when she saw me skid that load over the ice you'd have wanted to be a dog yourself and have a big, feathery tail to wag.

Still dragging the big *ta-ban* and using the burlap harness, we made our big record just before Christmas. Going into town, we loaded the usual odds and ends at the start and hauled a neighbor woman's suitcase—it must have weighed all of thirty-five—the last three miles.

Coming back we loaded one hundred and ten pounds of supplies (remember, the toboggan went twenty pounds itself), and to show the town loafers the Boss let me start the load and pull it to the top of the first hill by myself. Then, since we had a fellow along for a witness, he let me loose for a record.

Except for holding back going down steep hills, the Boss didn't give me an ounce of physical help for all of the three miles of road and four of river. But he did help in another way than pulling. When I'd get all tired and discouraged he'd come trotting alongside of me on his snowshoes and ask: *"Q'marshon, annymoosh?"*

And then he'd answer for me:

"To glory—GOOD."

Just like that, and it'd sort of lift me right against the collar.

But you can gamble a plate stacked with bacon rinds against a stale bannock that, when we got to the shack, I slumped right down on the bed and went by-by while the Boss rustled grub for both of us.

And talk about your eats! I lapped up plate after plate of good, warm tea with lots of milk and sugar in it, and then the Boss got busy with two frying-pans and tossed flapjacks for me until I was so full that all I could do was to lie on my side and look at the last one.

For Christmas the Boss gave me a new harness. It was made of leather, with a felt lining to the collar, and looks a whole lot more classy than the old home-made one—but I like the softer, gunny-sack collar best.

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Though the snow kept getting deeper, our constant trips up and down the river kept a smooth, hard trail packed. We made some fair hauls, but once the weather laid us both out, and this was the way it happened.

It was on a day when we loaded about 275 pounds for the river trip. I was hitched close up to the load, while the Boss pulled ahead with a long, extra rope. And it turned hot and the trail got sticky.

The toboggan wouldn't slip, my feet broke through the trail and the snow stuck to the Boss's webs and every time we stopped for breath the toboggan would freeze fast. We learned a lot about what we couldn't do—and had to cache all but thirty pounds after two miles of hard work in order to make the shack by bedtime.

I guess it was that trip which decided the Boss to make over the toboggan somewhat along the lines suggested by a Mr. Dillon Wallace, who's written a book about such things. When the Boss got through there was only a five-foot fourteen-inch, twelve-pound machine left. And it is sure a joy to pull.

The Boss has figured it out that, on this little toboggan, I can pull any load that he could comfortably pack on his back the same distance under the same trail and weather conditions. I think this is very conservative, as he don't mention that this means my doing the toting and leaving him free to break trail for both of us with his snowshoes.

Once, while visiting in the city, I was called upon to do some work hauling around a little niece of ours. But, with this exception, my toboggan toting has been straight woods work. Pretty sloppy work, probably, because, as I've already confessed, the Boss and I aren't very well posted.

But I am sure that what we have done proves one thing. It is that any fairly strong dog of good health and a willing spirit can make himself so practically useful in the winter woods that his Boss will be glad to have him along. And it's worth working some to be in the woods any time of year—with your Boss.

How cold is thirty below? Mr. Clarence F. Birdseye found out on the Labrador Coast last winter and will tell about his trip in the blizzard in an early number.

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COMMON SENSE IN EIGHT-OARED ROWING

By "RIGHT WING"

"He Teaches Best Who First Admits There's Something Left to Learn."—From a Lecture by Dr. Warre, the Famous Etonian

THIS is the time of the year when the rowing colleges lay the foundation for the next season's work. Men are called together, preliminary instruction given, likely beginners brought out. For this reason we are publishing this article now instead of waiting until next spring, when it would fail of half its mission. Its author has followed rowing, in college and out, for nearly twenty years and his article is the last word of an expert observer.

THOSE of us who witness annually the big university boat races and perhaps watch the crews in the American Henley and other regattas are prone to confusion worse confounded because of the hubbub over "strokes" of one sort or another, much wisdom on the part of the critics regarding rigging, and a mass of technical discussion of "form." Admitting that there is a great deal of complicated technique in university and even club rowing, whether it be in singles, pairs, fours, or eights, it must not be forgotten that both rowing and racing—and the one leads naturally to the other—after all are founded on common sense, and that although this coach or that may wander far from sound principles upon occasion he must eventually return to common sense as a guide.

Abracadabra will never supplant common sense in rowing or racing. I shall begin by being bold—but not too bold. Bold when I maintain that, strictly speaking, there is no "Courtney stroke," no "Ten Eyck stroke"—not even "the English stroke"; not too bold in that I hasten to admit that men like Courtney, Ten Eyck, Rice, Vivian Nickalls, Bob Cook, Gianninni, the Englishmen, Gold, Kirby, Gibbon, Le Blanc Smith, have their own ideas of rigging and certain other details, and that the ability to pick material is a part of the coach's "personal punch." I doubt, however, if the men named would differ materially over the *foundation* principles of sweep rowing if it came right down to open discussion.

Adherence to mere formula never made a successful coach or a winning crew. The great coaches have been those who could pick their material and fit the stroke to the material, not the material to the stroke. Success in this sort of thing means working from common-sense foundations. When the coach can add genius to common sense, we have a Courtney, a Rice, a Wray—whom you will that has been successful. There is no royal road to victory through formula—no such thing as algebraic rowing.

It is not my purpose here to delve deeply into such matters as rigging, side-seating—or, as the Australians call it, sitting "staggered"—but to explain as clearly as possible for the benefit of the man in the observation train something of the common sense of the sport.

The object of eight-oared rowing, then—and this is what is being taught at the leading universities this Fall—is to get eight men to move a boat a little over sixty feet long and weighing perhaps more than 250 pounds through the

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water at a reasonable pace with the least possible awkwardness and the least possible waste effort. This sounds simple, and is simple, until one gets down to the study of a few details.

Common sense serves to convince the average man that while his oar blade is in the water it should be working, and that while it is out of the water every effort should be made to destroy as little of the value as possible of that work while the blade was immersed. Common sense forbids immersing more than the blade, just as common sense forbids immersing only a small part of it. This is not easy to accomplish, but the theory is simple enough in all conscience.

Obviously, too, it is useless to stick the blade into the water so far forward that it makes an acute angle with the boat, or to keep it in so long that it is merely washing along and doing no work—indeed, actually holding back the boat. There is no use in immersing the blade at all if it does not maintain a firm grip on the water from start to finish of the stroke. While the grip is there the blade is working, while the grip is absent there is waste of effort. Obviously, also, the blade is doing its best work when it is at right angles to the water—with an exception to be noted later.

The Simple Terms

Now while the blade is in the air common sense teaches that it should offer the least possible resistance to the air, and for that reason it is turned over or "feathered," so as to be parallel with the surface of the water. Putting the blade in is called the "catch," taking it out is called the "finish," and getting into position to put it in again is called the "recovery." On these simple things has been built up a mass of technique that leads to endless controversy—a controversy with which the average spectator need not greatly trouble himself.

Now a word about the recovery. It must be plain to any man that eight more or less heavy bodies sliding aft together will check the run of the boat between strokes. Since it is physically impossible to avoid this checking altogether, common sense teaches that it would be well to devise a way to lessen it as much as possible. To that end it is well to return to the catch as stealthily as possible, slowing up perceptibly in proportion as the way of the boat gives out, in order that just as the run of the boat is dying there will be the least possible sliding of weight to stop the forward impulse. Common sense again.

Putting the above principles together, we have a theory of rowing that can hardly be attacked. And these principles will endure while sweep-rowing endures. Deviation from them is deviation in detail, and nothing else. The spectator in the train will observe that one crew puts its oars in sooner than another or takes them out sooner, or both; that another crew finishes more savagely; that still another seems to make a harder catch. The object, however, remains the same, and when it is remembered that after four miles of rowing five crews may finish with less than a minute between the leader and the tail-ender it must be obvious that more than one coach knows the common sense of rowing and has been able to teach it to eight men.

The main difference between the crews lies in their *racing* ability. Crews have rowed in what might be called perfect form, and have been beaten. Crews have rowed in what is called ragged form, and have won. The spectator owes a debt of gratitude to James C. Rice for his recent article in this magazine [June, 1913], in which he remarked that beautiful form was not everything. And Rice has turned out beautiful crews.

Let us go a step farther in our study of the common-sense principles of rowing. It is obvious that weight is an important factor, since we shall hope to keep our shell on an even keel, and going as straight as possible without the use of the rudder, since any pressure of the rudder tends to check the progress of the boat. Therefore it may be that we cannot put into our boat the eight best oarsmen in college or club, but the eight men who in weight, strength, and skill will fit best together. Neither the starboard nor the port four should be able to pull the other around. That seems simple enough, but the combination is not always easy to find.

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Common sense teaches that the boat will run best when there is less weight in the bow and stern than in the middle, or "waist," and for that reason the men are usually selected so that the weight runs down toward both ends of the boat. There have been exceptions, but exceptional men can do exceptional things, and not every coach has a wide range of material from which to select. Since any tendency to "bury" the bow checks the run of the boat, No. 1 is a good place for the lightest man, and since the stroke oar — when racing—must have some "drive" in his make-up, he should not be so heavy as to be sluggish.

There have been fine crews averaging 180 pounds, and equally good ones averaging 165 pounds. There have been good stroke oars all the way from 138 to 180 pounds. The men at both ends of this scale, however, were exceptional. One other point for the spectator to remember—No. 7, since he sets the pace for the starboard side of the boat, is practically a second stroke oar, and for that reason he, as well as the stroke, will bear watching when the boats come up to the mark.

Still keeping in mind the fundamental principles of rowing—based, as pointed out, purely on common sense — let us study the salient differences between English and American university rowing as they have been shown in recent years —and that English university rowing changes from time to time, some critics to the contrary notwithstanding, may be gained from the fact that the Cambridge crew rowed this year in a center-seated boat and therein gave the crack Oxford eight a serious scare.

The English university men use a short slide and a long reach. This means that the backs do a lot of work and that since the men go far past the perpendicular, both forward and aft, the abdominal muscles must work also. This has been found to be wearing on American crews, while apparently satisfactory to the English university men. The coaches of the latter are not under the burden of fitting the stroke to the men to any great extent, since their oarsmen come up from the schools already prepared, although the fact that Americans, Australians, and South Africans have rowed in their crews, and that these crews have been fast would seem to prove that the same common sense principles underlie their rowing that underlie our own. There has been experimentation in the English universities from time to time, notably at Cambridge, but there has been a disposition to let well enough alone, and since the Englishmen get results while still in the university, and later in the Leander Club, they can hardly be criticised for a conservatism that yields victory with considerable regularity.

American crews, taught for the most part by single scullers, use far more slide and far less body swing—*and get results.* Sometimes they bevel the oar slightly at the catch, something that cannot be done with English rigging—which is a detail. They do not always row with the straight backs of the Englishmen—which is a detail. Belgian oarsmen use probably the longest slide of all, and hardly get away from the perpendicular at all—which is a detail. All these methods are founded on the common sense principles mentioned early in this article. It is absurd to suppose that any one of these *variations* alone brings success.

One Victory Not Final

It may be set down as final that a single victory by one crew rowing a wide variation of style from its rival proves nothing. Continued victories such as those by Harvard over Yale at New London prove, not that Harvard has a better *variation* of rowing, but that Harvard has been better grounded in the fundamental, common sense principles. If the variation taught is such that it weans the crew away from the common sense principle, then it must of necessity be severely punished. Yale's experience in working under English coaches reminds me of the man who, because he found that one dose from a bottle of medicine did him good, promptly swallowed the whole bottle. The simple copying of an English eight will not make a first-class American crew. Because Bob Cook studied English rowing and coached successful Yale crews it does not follow that Yale can gain suc-

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cess by the complicated process of copying Oxford with the aid of Oxford coaches.

Back for a moment to a consideration of continued victories. The most conspicuous example is, of course, Cornell. Many critics have jumped to the conclusion that Charles E. Courtney, the veteran Ithaca coach, had discovered or built up a perfect rowing formula. There has been no formula about it. Courtney has turned out crews that have differed vastly from one another. But there was plenty of material, it was chosen with almost uncanny wisdom, and the stroke was *fitted to the material.* The "Old Man" is, of course, a master of technique, but many critics would be surprised to find how broad-minded he is when it comes down to a discussion of methods.

Much the same thing may be said of James C. Rice, the clever Columbia coach. I think Rice would be among the first to deny that there was any such thing as a "Rice stroke." Rice teaches polished rowing, using sound common sense. Like Courtney, he is a master of technique, and, like Courtney, he is broad-minded. Anyone who has ever heard him coach knows that he is no faddist, and knows, too, that he is a wonder at adapting the stroke to the material—and he has had some pretty poor material from time to time.

The fundamental difference between Courtney and Rice is the difference between racing and rowing. It is in nicety of judgment of pace and selection of the right moment to make the supreme effort that racing surpasses mere rowing, no matter how polished, and in this point Courtney's crews have surpassed Rice's. There have been several Columbia crews that, rowing against the watch under equal conditions, would have made better time than Cornell, but when it came to the actual test, whether the real racing effort was made in the first mile or the fourth, these crews were beaten by the Ithacans. Courtney is a wise waterman, and a wonderful judge of not only the individual character of an oarsman, but of the character of an eight. The "Old Man" knows just what is in his crew as a crew, and when his instructions have been followed his racing judgment has been vindicated.

Before Columbia became such a strong contender at Poughkeepsie, before Rice turned out such remarkable machines, Cornell's victories were usually clinched at the three-mile mark. The Ithacans rowed their rivals down. But when Courtney saw what fast eights Rice was turning out he decided that he must change his racing tactics. Therefore one year found the wily coach instructing his men to "kill off" Columbia in the first mile; another year telling his men—there being a fairly strong wind from the east—to save their effort for the last mile, when they should be sheltered by the lane of yachts. There was never any telling, when the eights went to the mark, just what racing tactics the Ithacans would use. Rice's method, on the other hand, has been to send his crews right out from the mark, instructing them to take the lead as early as possible and hold it. As a rule, however, the Columbia oarsmen did not have the physique to follow this program successfully for four miles.

A "One-Idea Crew"

Last year Rice's men went even farther. Not content with being up in front at a reasonably early stage, they proceeded to set an impossible pace, in the hope of "cooking" Cornell, and Cornell, out from under the guidance of the "Old Man," for once lost their racing heads and accepted the hopelessly killing pace. Cornell, having the superior physique, was able to last and finish second, while Columbia rowed itself out and finished farther back than it should have had better headwork been used.

Columbia's races have been one-idea races—not nearly so resourceful as Cornell's. As Rice ripens in experience and gets material that will warrant cleverer generalship in actual racing the Morningside eights undoubtedly will be more resourceful. As the record stands, however, Courtney's crews have been better racing crews.

Now, in England, while the customary stroke of the university men has proved most successful, it has not gone unchal-

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lenged. The extreme reach and the short slide do not find favor with many English experts, notably the professionals. The university men have been prone to say that the professional sculler cannot teach sweep rowing. This criticism has been squarely met through the successes of the English professional scullers in handling eight-oared crews in other countries.

Probably there is no name in English rowing greater than Nickalls. Vivian Nickalls and his brother Guy ought to know something of English rowing of all kinds. Yet when Vivian Nickalls came over here and took charge of the Detroit Boat Club, with remarkable success, he did not bring with him either an Oxford or a Cambridge rowing style. He brought with him only the everlasting, fundamental common sense principles of rowing, and these he applied to the material at hand—and pretty poor material at that. There was no formula. Nickalls taught simply those principles of rowing that even the spectator in the observation train can understand.

Nickalls found in the Detroit Boat Club an organization whose members seldom sat in a shell. It had degenerated into a purely social club. There was first the need of building up a rowing spirit. This was slow work, but the Englishman accomplished it. Then he set about getting out material for racing crews. The picking was poor. There was perhaps just one natural oarsman in the lot. The coach had to take what material he could find, which resulted in his boating a crew of all shapes and sizes, averaging in weight about 145 pounds—discouragingly low.

These men had to learn rowing from the beginning. Nickalls had to give them a stroke that they could row, not a stroke that he might have preferred to have them row. So through patient coaching he got his men together and in one season worked wonders simply because he adapted the stroke to the men, just as he has done in handling subsequent eights.

There was no effort to say to these men: "Here is the English stroke; you must learn to row it." Had Nickalls adopted this method his régime undoubtedly would have resulted in flat failure. If ever a coach was tempted to teach a set stroke and then blame defeat upon the men in the boat Nickalls was so tempted. He put aside that temptation because he was a sound oarsman and addicted to the use of common sense. He will have charge of the University of Pennsylvania oarsmen henceforth, and it will be interesting to see how his teachings will work out at the four-mile distance.

E. J. Gianninni, coach of the New York Athletic Club, and a man who has turned out some splendid crews, is another man who has no formula, but whose methods and theories are built on common sense.

Perhaps the greatest contrast in variations in eight-oared rowing was that furnished by the race for the Grand Challenge Cup at Henley in 1907 between the Leander Club and the Belgian club from Ghent. The Englishmen used the customary long body swing, short slide and long oars with narrow blades. The Belgians used the full-length sculler's slide, fairly short oars, and wide blades. Leander boated one of the best combinations of university oarsmen ever brought together in England. The Englishmen had an advantage in the matter of boats, for the Belgians rowed in an old, portable shell—one of the take-down variety. The Belgians won the race with something to spare in the way of reserve strength and were not favored by the condition of the course.

Yet this race no more proved that the Englishmen were fundamentally wrong than did the subsequent victory over the Belgians of the Jesus College crew at Ghent prove that the Belgians were fundamentally wrong.

In the Matter of Rigging

Rigging is quite another matter. The fundamental use of rigging is to make the oarsman comfortable. Americans have found that they can make their men more comfortable, can avoid waste, and can hoard up energy for the final drive for the line, by using the long slides. Whether the long slides would prove an advantage to an English crew no man

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can tell. The Englishmen have chosen their variation, we Americans ours. Both seem to get results, and the getting of results is the object of eight-oared racing.

No one who reads the lectures of Dr. Warre, of Eton, famous in his day as a master of rowing, can doubt that English university rowing is founded on common sense. No one who talks to Courtney, Rice, Ten Eyck, and other American coaches, can doubt that all these men are working along common sense lines, and no one who has watched the work of Dr. J. Duncan Spaeth with Princeton eights can fail to realize that his rowing is as sound in theory as it is in practice. He, like the others, indulges in a variation or two.

Americans use the swivel rowlocks instead of the tholepins, because they believe them to be a step in advance of the old system. The English university oarsmen have their own reasons for retaining the tholepins.* They are not reasons, however, that will always stand transplanting. If the tholepin is transplanted the rest of the variation should go with it, for the American slide is too long to make the tholepin feasible.

All these things, however, are matters that need not greatly trouble the spectator. It might be a good plan for him to watch the men in the boat as the lean shells come up to the mark, for, all other things being nearly equal, and granting good racing judgment, it is the material that counts heavily. It has been the custom to smother the coach with praise after a victory and to neglect the oarsmen themselves. The crew is spoken of as a "machine," which is true enough, but the machine is no better than its weakest bearing, and the men themselves should receive a deal of the credit when they make one of the fighting finishes so frequently seen at Poughkeepsie in recent years.

Boating history is full of famous stroke oars, and granting the coach all due credit for his work, these stroke oars have themselves turned the trick more than once. There is more in the game than is to be explained by technical catch phrases about this or that "stroke." And it is a common-sense game.

*They hold that the beat of the oar against the pin gives better time for the stroke.

SAVING TIME WITH A KETTLE

By KATHRENE GEDNEY PINKERTON

THE intricacies, modifications, and economies of camp cooking must be learned by experience. Its possibilities are limited only by the ingenuity of the cook. Its pursuit is as fascinating and its mastery as gratifying as that of any other outing activity. And its study is as important. A good woodsman is always a good cook. Skill with the paddle, accuracy with the rifle, endurance on the trail are far less discernible and appreciated hallmarks of woodsmanship than wizardry with pot and pan.

The good woodsman has learned the importance of economy in time and effort. He has learned to apply it to cooking as to other branches of woodsmanship. He knows that a meal ready to be warmed up at lunch-time gives him thirty to sixty minutes more in the canoe. He realizes that a little extra effort after the dishes are washed each night will provide an adequate meal the next day. And the cooking is done while he is enjoying his after-supper pipe beside the campfire and not when he might be putting miles behind him.

Almost anything cooked in a kettle can

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be carried and warmed over the next day. Opportune use of this utensil makes possible better food, a longer day's journey, or more leisure to enjoy the out-of-doors.

Especially is this true in the cooking of such foods as beans and peas, where the nourishing qualities must be brought out by thorough cooking. A sandy beach may be utilized for a bean hole, and the beans, warmed the next day in a frying-pan, provide a delicious luncheon. To prepare beans for the bean hole, cover with cold water, add a teaspoonful of soda, and bring to a boil. Pour off this water and cover with hot water. Add to each cup of beans a heaping tablespoonful of brown sugar and a third of a tablespoonful of salt. Lay strips of salt pork over the top and pepper to taste. Bring this to the boiling point, and the kettle is ready for the bean hole. The water should cover the beans a quarter of an inch.

The proper heat for a bean hole must be learned by experience. Directions must vary to suit soil and dampness. As a rule, in sandy loam the fire should burn an hour or more, leaving a thick bed of coals. Nearly all the coals should be raked out and then raked in again with the soil. The beans will bake in twelve hours, though they will improve with longer baking, and may be taken hot from the hole after twenty-four hours.

When there is neither time nor a place for a bean hole, a good substitute may be obtained by boiling beans until they are soft. This can be done in about two hours. Season as for bean-hole beans, but do not add so much sugar and that not until a few minutes before they are taken from the fire. Be watchful in the last half hour, for they will burn easily, especially after the sugar has been put in. When cool, pack in a push-top tin. They make an excellent quick lunch the next day when heated in bacon grease in a frying-pan.

Small game, such as partridges or rabbits, lend themselves readily to this forehanded cooking. In stews or casseroles they lose none of their flavor in reheating.

Partridges in summer are a little tough and are better in stews. If, however, you are a stubborn adherent of fried partridge, let the fowl simmer gently until it is tender. Dredge with flour, salt and pepper, and fry in bacon grease. It can be easily warmed in a greased frying-pan the next day.

In the fall an occasional rabbit is welcomed. Use only the back and hind legs. The rabbity taste can be eliminated by putting a tablespoonful of vinegar in the water in which the rabbit is boiled. Hard boiling will toughen the meat. Allow it to simmer gently for one or two hours. When tender add a minced onion and some bacon grease to the liquor and place in the baker to brown.

The Germans prepare rabbit in a more ambitious manner, but one that well repays. The disjointed rabbit is simmered until tender. Pour the meat and liquor into a dressing made as follows: Fry until brown three or four pieces of bacon which have been diced. Add to this a tablespoonful of flour, a teaspoonful each of sugar and salt, a tablespoonful of vinegar and a few cloves, if possible. Stir well to keep from burning. In both cases time can be saved by simmering the rabbit in the evening and, on the following day, browning in a baker or serving with the German dressing.

Often, with the anticipation of a hard paddle before us, I prepare a camp stew in the evening. After gently simmering pieces of meat, a half hour before the meat is to be done I add potatoes, onion, and some wild rice. The next day I serve after reheating or add dumplings. If dumplings are added, they should not be dropped in until the stew is hot. To insure having gravy, the water should cover the meat and vegetables when the dumplings are put in. Dumplings are mixed like baking powder biscuits, but without shortening. They require twenty minutes to steam and are better if not uncovered while cooking.

There are any number of dishes that suggest themselves for this manner of cooking. If, when tired and hungry, you once experience the delight of uncovering your meal nearly prepared, you will feel repaid for the little time spent over the campfire the night before.

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GETTING THE DOG READY FOR THE SHOW

By WILLIAMS HAYNES

How to Give Your Dog the Chance He Deserves When You Take Him Into the Ring

IF one considers the case of the individual dog, it seems a good deal like putting the cart before the horse to interpret the A.K.C. show rules and to explain the formalities of entering at a fixture before saying a word about the things that must be done before he will be in fit condition to be exhibited under those same rules and regulations. [See August OUTING.] However, it is perfectly good logic to come from the general down to the specific. Certainly, one would hardly think of giving a beginner at bridge instructions in the approved way of arranging his cards in his hand, before telling him of the objects and principles of the game. It is more important for him to know that the ace of trumps is the highest card in the game than to know that the most convenient way to arrange his cards is in sequence according to suits, with the trumps on top.

The technical filling in of an entry blank for a bench show is like the pugilist's shadow boxing or the final signal practice of a football team just before THE day. A long course of training has preceded these finishing touches. A prize fighter who went into an important fight without training, or a football team that played a championship game without practice, would but be courting defeat. No one would be very greatly surprised at the outcome. But the very man, who would roundly denounce such a fighter as a fool and an untrained team as duffer, will enter a dog at a show without any preparation and ask him to show himself. Then he will kick like a mule if the judge does not hand him blue ribbons in every class.

Many good dogs have been placed lower in the awards than their quality really merited merely because they have been shown in poor condition. Such defeats are not only particularly displeasing, but they are unnecessary and very unprofitable. It is hard enough to be beaten anyway, but there is no sugar coating on the bitter pill of unnecessary defeat. A dog that can win at the bench shows is valuable, but to be among those who are "Highly Commended" does not add to his value.

Just the other day, at a summer terrier show, I placed an Airedale puppy, "Reserve," who, except for her shocking condition, should have been "Second." It is not a pleasant thing to have to do. No judge enjoys putting a good dog down on condition. He is there to judge the dogs just as they appear before him in the ring, not as they might or could look. There is nothing else for him to do honestly.

A very big proportion of the disgruntled exhibitors at bench shows are people who have shown their dogs out of conditions. A not uncommon instance is when a really good dog, who has done considerable winning, changes hands and at some show is beaten by dogs that he has several times beaten. The new owner is often so blind that he cannot see that it was merely a matter of condition.

The novice is sometimes given to thinking that the big kennels and the professional handlers exercise an unfair monopoly of the blue ribbons and the silverware. As a matter of fact, I fancy most judges would rather "give the edge" to the small exhibitor. But the dog from the big kennels, or the one

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shown by a professional handler, is, nine times out of ten, shown fit to the minute and so handled in the ring that his best points are always brought out to the best advantage. This is the advantage they enjoy.

It is stretching things pretty far to call it an unfair advantage, though it must be admitted that in some breeds it takes considerable skill and experience to put the entry down fit, and handling in the ring is assuredly a fine art. However, there are any number of small owners who are noted for the splendid shape in which they show their dogs and the skill they exhibit as ring generals. Others can enjoy the same enviable reputation. Practice, backed up by work and patience, is what is needed.

Of course, the very foundation of all fitness is perfect health. Good health means that a dog will be neither as thin as a matchstick nor as fat as a hogshead. Good health also means good spirits, and good spirits count in the show ring. No dog should be benched who is noticeably fat or thin. A dog that is a bit long in back, or too much cut up in loin, will obviously stand a few extra pounds. Conversely, one that has a sausage body will be improved by being shown a little light. Until he has enough experience to enable him to be sure of himself the novice does not want to attempt too many of these fine points. At first, he can be content to have his dog in good health. The right food, comfortable quarters, and proper exercise are the secrets.

Probably the factor next important to good health in the success of a show dog is his coat. In many varieties, the condition of the coat is so vital as to be able to make or mar a dog as a show specimen. Some coats are easy to handle. Others cannot be made fit by any amount of care or trimming.

All dogs, no matter what variety of coat they carry, shed at least once a year, and it is always best to show a dog with his new coat. The old, dead coat, be it long, short, or wiry, is not so good texture or quality. Another good general rule for all to bear in mind is that too much washing will hurt the texture of any coat. Of course, a dog must be shown clean, and to cover up dirt with chalk, pipe clay, talcum, or similar substances is a lazy man's subterfuge. It is ludicrous to see a judge run his hands through a white coat and have a gust of white powder float off in the breeze, for all the world as if the dog was a walking powder puff. Be the coat an important point in judging the breed or not; be the coat an easy or a hard one to put into condition, it all depends upon what kind of a coat it is, what treatment it needs, so let us consider each variety and its proper preparation in detail.

So far as work goes, the short coat is an everlasting joy. In a healthy dog, whose skin is kept clean and free from eruptions and parasites, the only treatment necessary is combing with a fine-tooth comb, in order to remove the dead, old hairs, followed by a good rubbing, either with a soft cloth or the hands. The rubbing imparts to the coat that soft, sheeny gloss so particularly desired in very fine-coated dogs, like the Boston Terriers, Bulldogs, French Bulldogs, Manchester and Bull Terriers, Greyhounds, Whippets, and even Pointers and Great Danes.

Making a Short, Fine Coat

Some dogs supposed to have a short, fine coat have a distressing habit of growing a coat too long and coarse in texture. Give such dogs an extra dose of combing, and before the hand rubbing go over them with a hound glove, such as any of the kennel supply firms have on sale. Long hairs on the neck and shoulders, along the spine, and in and about the ears should be plucked out with the thumb and fingers.

Dogs of the long-haired varieties require more attention, but excepting the tiny Yorkshire Terrier, who has been described as "more hair than dog," they are not so troublesome as the wire-haired breeds. First and foremost in the care of a long coat comes cleanliness accomplished with as little washing as possible —a somewhat paradoxical problem. Too much soap and water injure the growth of the hair and impair its silky texture. No long-coated dog should ever be washed within forty-eight hours of going

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to a show. If he is combed and brushed daily, frequent baths will be unnecessary. The daily grooming will keep him clean, and it acts as a tonic, stimulating the growth of the hair.

When he is shedding, the grooming should be attended to with particular care, so that the old coat may be naturally removed and the new growth given every encouragement. Of course, he cannot appear in the show ring till the new coat has come in. In washing Setters and Spaniels, whose coats often have a tendency to curl, drying must be done thoroughly, or the tendency will increase. Any wave in their coats will be a severe handicap in the ring. All mats or tangles in the long coat must be carefully combed out, especially in the flag and frill. Coats that are not as long as might be desired can often be encouraged by a weekly dressing of two-thirds cocoanut oil and one-third kerosene. This should be rubbed into the roots, but as little gotten into the hair itself as possible.

Any dogs whose hair is long should be watched at exercise and play to prevent their hurting their coats. Running through rough country, bushes, brambles, or briers is not going to help the length of coat. In the toy breeds, where this length of coat is of particular importance, it is customary to house them in little boxes indoors, and to enclose their hind feet in socks, so that they cannot harm their coats by scratching. In fact, in the Yorkshire Terrier, mentioned above, these precautions are carried to an extreme and the careful cultivating of the coat is almost a fetish with fanciers.

The finest specimens in the world have been produced in the homes of workmen in the Midland districts of England, where these diminutive dogs are literally made members of the family and have hours of painstaking attention each day. Few Americans have the time or patience necessary to become successful exhibitors of this charming variety.

The corded coats worn by the Poodle and the Irish Water Spaniel require slightly different treatment. The essential is to have each one of the long cords distinctly curled for its full length. Accordingly, tangles must be guarded against. The Irish Water Spaniel does not require the great length of coat demanded in the corded Poodle, but his topknot must be profuse and his tail trimmed bare, for all the world like a whalebone driving whip. The corded Poodle's cord should be long—the longer the better—and he is also clipped like a lion. The face, except for mustachios; his hind quarters, except for two tufts near the knuckle bones; his legs, except for rings just above the pastern, and his loins are all clipped. The same treatment is accorded to the curly Poodle, except that his coat must be combed out always against the grain.

What has been said about washing and grooming the long-coated breeds applies with equal force to those varieties with stand-off coats. Collies and Pomeranians are the most popular of these breeds, and in both the coat is a point by which judges set considerable store. Miss Ives, the very successful English exhibitor of Pomeranians, once told me that all of her dogs were brushed for at least half an hour every day. They certainly showed the advantages of such treatment, for I do not remember having seen any kennel where such exceptionally good coats were the rule. The ears and feet of both these breeds must be cleaned of superfluous hair, and it is customary to cut off a Collie's whiskers close to the lips. The Chow Chow, with his fur-like coat, is in a class by himself, but nearest to these breeds. Like them, he should be groomed against the grain.

The Coat of Coats

But the coat of all coats, judged from any point of view that you wish, is the wire coat of the terriers. In many ways it comes nearest to being the ideal covering for a dog, but from a fancier's standpoint it certainly has disadvantages that are intimately connected with show preparation. In perfection, which is precious seldom seen, the wire coat is double, a wire-like overcoat with a soft, woolly lining. Such a coat makes a capital mackintosh in wet weather, and it is a perfect armor against thorns, nails, and teeth.

It is almost impervious to cold, yet

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not uncomfortable during the summer months. It does not shed, covering the house from pantry to attic with dog hair. It is unique, and when kept in proper condition, attractive. But—and here is the rub—putting it in approved show form is a task. It is not a bit harder to keep a reasonably good coated wire dog in passably presentable appearance than any other, but to put him down in front of a judge at a bench show requires a rare combination of skill, experience, and patience.

To-day every newspaper and magazine contain advertisements of correspondence courses, and truly of the making of "how-to books" there is no end; but the art of putting down a wire terrier cannot be taught except by actual demonstration. Each of the breeds is trimmed in its own style, and in a great measure each dog must always be a style unto himself, for no two grow just the same kind of a coat and no two have the same points to be emphasized or the same defects to be covered by the clever trimmer.

Roughly speaking, however, the method followed is to assist nature by stripping off the old coat when the dog is shedding. At this time, the coat pulls out easily. This stripping is timed so that the dog's new coat will have grown out to the approved length at the time of some important show. Only experience can determine when the stripping should be done, for some dogs grow a new coat much quicker than others. As a general thing a soft coat will grow more rapidly than one of harder texture, and a dog with a soft coat will be shown shorter.

An Airedale is shown with the shortest coat—only about half as long as a Scottish Terrier's. Fox Terriers are also trimmed fairly close; Irish and Welsh Terriers somewhat longer; and the West Highland Terrier is shown almost in the rough. But each dog of each breed requires individual treatment, and it would be silly to try to give any general formula. In those breeds that are supposed to be long of head and flat of skull, the heads are trimmed as close as possible to emphasize these points, and whiskers are developed to give the impression of strong muzzles and well filled-in forefaces. Shoulders are cleaned off and feet plucked out.

But the only practical advice to give a novice is to learn carefully the points required in the ideal of his breed; to appreciate where his dog excels and where he is lacking; and then to get an experienced and clever trimmer to give him a few lessons in the art. A couple of such lessons, careful observation of the dogs at the shows, and then practice —this is the way to learn to put down a wire jacket. It is not by any means an impossible lesson.

In many breeds correct ear carriage is an important detail. To cut the ear flap (except in Great Danes, Boston Bull, Manchester and Toy Terriers) or to break or mutilate the cartilage is deliberate faking and punishable by disqualification. It is, however, perfectly permissible to do a certain amount of training so that the correct carriage may be developed. During the teething period of their puppyhood, many dogs will have eccentricities in their ear carriage. It is distressing to see a youngster with good ears carry them askew at this time, and occasionally he gets into the habit of so doing. This should be prevented.

Getting the Ears in Shape

Button ears, like the Fox Terrier's, often have a tendency to be carried too high and flippy. This can be corrected by weights. The best method is to cut a bit of sole leather the shape of the ear and fasten it inside the flap with cobbler's wax or glue. A low ear carriage of a button cannot be so easily remedied. Massage and pinching the ear up into a better position make some improvement. Plaster of Paris has been resorted to, but I have never heard of a case where it was very successful. A Collie's ears, because they are a most artificial carriage, are often troublesome. The correct ear is erect with just the tips falling forward. When the ear is fully erect, a tiny bit of leather on the tip will often induce it to drop as required, while an ear that refuses to come up may be trained either by a piece of stiff leather inside, or a strip of adhesive plaster on the outside.

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A Bulldog's ear which does not rise should be massaged, and possibly weighted or fastened with adhesive plaster. Experiment will show which will be the most effective method in each case. Of course, all these weights or supports must be removed before a dog is taken into the ring, but their use in the case of a young dog is quite justifiable, so long as they are confined to training and not used to deliberately change a naturally bad ear in an aged dog.

There is nothing that can be done to remedy a bad tail carriage. Bulldogs, Boston Terriers, and French Bulldogs are all supposed to have naturally short, kink tails. Sometimes these tails come considerably longer than one would wish, but to cut them—a thing that cannot be done without detection—will bar the dog from all bench shows. The tails of Fox, Airedale, Irish, and Welsh Terriers and of all Spaniels, except the Irish Water Spaniel, are docked. In Airedales about three-quarters of the tail is left on, in the other terriers about half, and in the spaniels about a third.

In almost all breeds a small, compact foot is desired and the appearance of the foot will invariably be improved if the dog's nails are trimmed. This is a perfectly harmless operation, if ordinary care is exercised and the quick is not cut into. Long nails press against the ground and spread the foot out, making it appear larger than it really is. The very heavy breeds often stand on big splay feet. These are very often the direct result of insufficient exercise.

The old question of show preparation and faking is still a vexed one. It is preposterous to think that in order to be sportsmanlike a fancier must show his dogs in the rough. We do not brand a man a fop because he shaves each morning and keeps his hair trimmed and his teeth clean. However, in some breeds where trimming and barbering are carried to an extreme, there is a very nice distinction between show preparation and deliberate faking. But so long as the style is set and is approved by the judges, one has to follow it or be nowhere when the awards are made.

It is possible that you may take your dog before the judge in the very pink of condition and fit to the minute according to the dictates of style, and yet you may not receive all that your entry deserves. He must have good ring manners. The judge places them as he sees them on the day, and it is not his fault if your dog does not let himself be seen at his best.

A show dog's education should begin early. His first lesson will be on the collar and lead. Break him to the collar gradually and progress to the lead by easy stages. Never yank or jerk him on the lead, and do not put him on the lead as a punishment. A dog's association of events is strong, and since you want to show him at his very best on a lead, let his associations with it be pleasant.

After he is thoroughly broken to the lead and has been out on the streets on it and among other dogs, his next lesson should be to stand properly when brought to a halt. Obviously a terrier, a bulldog and a spaniel will each stand differently. If one is going into showing on any scale, it will pay to rig up a little home show ring, with a block in the center, and to train the young dogs in it under circumstances as nearly as possible imitating the conditions of a real show. A novice will learn a great deal by watching the good handlers in the ring at the shows, but these observations should be made before he is himself contesting. At that time he will have his attention occupied in seeing to it that his own dog keeps "his best foot forward."

Generally bad ring manners in a dog are only a sign of carelessness in his owner, but bad ring manners on the part of an exhibitor are always bad sportsmanship. The former is excusable, but it is mighty hard to find an adequate excuse for the latter. Do all that you can to attract the judge's eye favorably to your dog, but never try to hide another's dog or attempt to induce him to show badly. A bad loser in a show ring is just about as poor a spectacle as can be seen. In fact, it can only be rivaled by a poor winner. If you have won, it detracts not a whit from your honors to say a good word for the dogs that your dog has beaten. If you have lost, you will lose nothing by congratulating the winner.

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HUNTING WITH THE HUICHOLES

By HARRY H. DUNN

ILLUSTRATED WITH PHOTOGRAPHS

An Invasion of a Wild Game Paradise with the Last of the Aztecs

HIS name was O'Hara, Thomas O'Hara, but he spelled it Tomaso Ojara, and pronounced it just as one of his forefathers from County Clare had said it when he, Irish soul of adventure set in a wandering body, landed on Mexican soil some three hundred years before. But the cream-skinned, doe-eyed beauty who brought him wealth and sons and daughters had changed it to Ojara. I met him at the ruin of Chicomoztoc, first city of the Aztecs after they were hurled southward out of what is now New Mexico and Arizona by the mighty wave of Athaplascan migration. Out of Chicomoztoc went six tribes, one of them to end its existence beneath the sword of Cortez in the Vale of Anahuac, four to disappear as completely as the Ten Tribes of Israel, and the sixth to hide itself in the gaunt, forbidding gorges of the Sierra Nayarit.

Now Ojara's forefather was Irish; so was my father. I knew the Aztecs from the south; he knew them from the north; he loved the historic ghosts of the past; so did I. Both of us were born to the saddle and the rifle, and naturally we foregathered at the great ruin where we met. He spoke not a word of English; my Spanish then, in the autumn of 1908, was halting, but he helped it, and when he proposed that we visit the remains of the Aztecs, the Huicholes of the Sierra Nayarit, some hundred miles west of Chicomoztoc and fifty from his 60.000-acre hacienda on the banks of the River of Souls, in Zacatecas, we went.

You can find Nostic, just at the head of a great canyon on the eastern side of the Sierra Nayarit, on most maps. It is on the borders of the State of Zacatecas, not far from the borders of the *Territorio de Tepic.* Into it we rode, just as the rains of December began to overlay central Mexico with a carpet of emerald. There we met one Felipe Alfaro, *commandante* of the *rurales,* himself a huntsman, and a soldier who died three years later defending with his nineteen *rurales* the *cuartel* old President Porfirio Diaz had given him to guard.

After three days in Nostic, where we saw our first Huicholes, girl servants in the homes of the better-class Mexicans, we turned due west, accompanied by Ojara's *mozo,* a half-breed Huichol, whom we nicknamed *"El Chino,"* because he looked like a Chinese, and my Zacateco boy, Ausencio.

We rode possibly ten miles up the gorge, when we came suddenly on an Indian so small that he seemed a dwarf. He was clad in white cotton shirt and trousers, a sort of pajama garment; round his middle was a wide, gaily-colored sash, in which was stuck an obsidian knife and seven pouches, woven from dried grasses, and apparently filled with food. On his back was slung a bow and quiver full of arrows. In his left hand he carried a staff and in his right a gourd of water. His broad-brimmed straw hat was covered with wild flowers.

He raised his left hand, as a signal for us to stop. El Chino forced his mule forward and translated:

"I am Juahlcama"—at least that was the sound of the name—"chief of the Vishalika. Who are you and where are you going?"

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"Tell him," replied Ojara to the interpreter, "that we are coming to visit him; that we have heard of the Vishalika (the Huicholes' name for themselves) as famous hunters, and that we wish to hunt with him."

"My people and I are going to worship* Hikuli," replied the Indian. "The goddess calls us and we shall be on the pilgrimage fifty days and nights. I do not like your looks and the Vishalika wish no visitors, but if you go on you must leave your arms here."

This frank statement seemed to put an end to the expedition, but Ojara dropped from his horse, whispering to me, "Keep your rifle on him," drew three strings of beads, red, blue, and green, from his pocket, and advancing to the little fellow, hung all three round his neck.

The gift worked like magic. The Indian toyed with the beads, lifting them to the light like a child with a prism, letting the broken rays play on his face and his white shirt. He turned to the interpreter:

"If you wish to hunt, you may enter for three more strings of beads."

We paid the toll with alacrity, and as a drum sounded farther up the gorge, the chief motioned us to one side. "My people are coming," said he, "and you must wait until they pass. Then give this to the Man at the Gate."

He took an arrow from his quiver, tore a piece of cloth from his sash, plunged the head of the arrow through it, and handed the symbol to Ojara. We drew back against the wall and down the canyon came the Hikuli procession, headed by three wrinkled priests, each covered with flowers and each beating a drum of deerskin. Behind them marched about fifty old men, evidently priests also, while following them were three old women, and, last of all, some fifty girls of twelve to fifteen years.

They passed without noticing us and without a word save for their constant mumbling chant, the chief taking his place ahead of the three priests with no farewell.

Steadily we rode all that day, with a short stop for lunch, walking our horses, until, near nightfall, we came to a spring, where we camped in a welter of huge ferns. In the morning we turned southward again, along what El Chino said was the backbone of the Sierra Nayarit, a range so wild and inaccessible that the traveler ceases to wonder at the isolation of its inhabitants. About noon we descended into a well-wooded canyon, riding along this for a mile, until, coming to a point where the canyon walls left only about ten feet for the trail, Negrito, my horse, began to dance on his hind feet. Just as I succeeded in getting him down to earth and was talking him into passing the stone buttresses, an Indian, so like the chief that he might have been his twin, appeared in the middle of the trail.

He held up his left hand, started to speak, and El Chino came forward to interpret, when Ojara pulled the spear and the cloth from his bootleg. Instantly the Huichol stepped aside, swinging his hands up and down the trail to indicate that we might pass. Don Tomaso descended from the saddle again, however, and decorated this Indian with the "order of the beads," as he had the chief, and we left the Man at the Gate likewise holding the baubles in the sun.

Three hours we rode, and then, from a sky clear as turquoise, heard a rumble as of distant thunder. We could not

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**Hikuli*—the name of the titular deity, a sort of a Venus, of the Huicholes. Each year members of the tribe make a pilgrimage to Real de Catorce, about 250 miles from the Huichol pueblos, where the globe cactus (*Echinocactus horizontalonius*) grows in profusion. This plant, called also Hikuli by the Huicholes, is collected and eaten, producing a sort of sexual insanity and resulting in orgies akin, in a crude way, to the Saturnalia of the Romans. The girls mentioned above are "brides of the chief," who are selected each year to live in his harem until the next Hikuli festival, when they are married off to the youths of the villages and a new set of "brides" chosen. Marriage among the Huicholes takes place at from twelve to fifteen among the girls, and sixteen to eighteen among the boys. Girls who have been brides to the chief, and especially those who have borne him sons, are especially sought after as wives by the young men of the pueblos, as these babies have chances of becoming priests or even chiefs. The journey from the Sierra Nayarit to Real de Catorce, in the State of San Luis Potosi, occupies about fifty days.—AUTHOR.

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INDIAN MUSICIANS AT NOSTIC. THE OLD MAN IN THE FOREGROUND IS A HUICHOL

place the direction of the sound, but we knew that the bed of a gorge is no place to pass a tropical thunder storm, and we started to climb out when the thunder came again, this time in regularly recurrent throbs. El Chino checked his mule. "Wait, Señores," he called up to us as we paused midway on the slope. "That is not thunder; it is the noon drum of my people. We must be near one of the *pueblos.*"

We counted seven rolls of the drum, and then went on until we came to where, in the bare sunlight, the gorge ended in a V-shaped cut in the cliffs, and the stream dropped sheer into the bed of a canyon beside which the one we had been following was a crevice in a mole hill. This greater gorge was possibly half a mile wide, its sides barren as a Sonora plain, its top limned with pines and oaks, while midway up the further side a cluster of round clay or stone buildings, set on a shelf in front of a huge cave, marked the Huichol pueblo. The houses seemed as if lifted bodily from some Kaffir kraal and set down in this wildest part of Mexico, but the white-clad inhabitants, moving in numbers among the buildings, soon ended the illusion.

With difficulty we found an old and much worn trail leading three hundred feet down into the gorge, across a considerable stream, and up a slope to the town. Scarcely had we started up this last lap of the journey when about fifty Indians, all armed with long spears and bows and arrows, and led by a man even smaller than the chief, came two abreast down the trail to meet us. At first the demonstration seemed hostile, but as they came nearer their faces showed pleasant expressions, and when Ojara presented the arrow we were informed that they had known of our coming since a few hours after we passed the Man at the Gate, and that we were welcome so long as we did not interfere with their religion.

Three men were told off to aid our mozos in the care of the horses and the leader, who spoke Spanish brokenly, led us to one of the largest houses in the village. This building, which was typical of the others, was built of stone and cement, the latter red in color, and bound together with shreds of corn husks. It was circular in shape, with but two openings, a door about four feet in height and a round hole in the peak of the thatched roof to allow smoke to pass out. There was no furniture, but on a stone shelf at one side was an *olla* filled with water

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JUAHLCAMA, CHIEF OF THE HUICHOLES, PHOTOGRAPHED IN NOSTIC, ONE YEAR AFTER THE AUTHOR'S TRIP

and a gourd from which to drink. On another shelf was an image of the goddess Hikuli, while in several holes in the wall were stuck wild turkey feathers, evidently to ward off evil spirits. The leader of the party which met us, a subchief in command of the village while the real chief was on pilgrimage, wore a band of some bright metal, apparently copper, around his forehead, binding back the long black hair which flowed nearly to his waist.

The Huichol religion is a sort of pantheism, and they believe that their main temple, a cave, is the center of the universe. Their boy children are named for gods; the girls for goddesses, and family names do not persist through generations, except in the case of chiefs and priests. The priesthood has a strong hold on the people, strong enough to prevent the entrance of Catholic priests or the teachings of Christianity into the tribe, which consists now of about 5,000, and is slightly on the increase after being decimated by smallpox some twenty years ago.

That afternoon we were taken through the village, meeting and talking with some of the head men, and attracting much less attention than our two black horses and the mules, for the Huicholes have no animals of burden, and many, especially of the younger generations, had never seen such creatures. El Chino found some relatives, and we dined sumptuously that night off rabbit, deer, and wild turkey, with corn cakes and squashes—the latter dried—while for drink we had *tesguino,* a sort of cross between wine and beer made from fermented corn and herbs.

At first the Huicholes objected to posing for photographs, but, after I had showed them some completed prints and the *shamensi,* or priests, had conferred on the matter, I was allowed to make pictures of whatever I wanted. Secret service agents of the unfortunate President Madero now have most of these negatives in the 3,000 they confiscated from my home in Mexico City in the fall of 1912.

Having gained entrance to the Huichol towns, I was less anxious to hunt than I was to study the queer, Mongolian people, but to their literal minds we had come to hunt, and hunt we must. Their chief had told their guard that we were to hunt and they were bound to assist us, and they did. A deer hunt was planned for the next day, and all our pleas of fatigue from the journey were vain.

"Men who have compelled such animals as these (pointing to the horses) to obey them," said the Spanish-speaking priest to me, "should not know what it is to be weary, when there is so much game in the mountains." I have often wondered if there was not a subtle irony in this speech, but if there was the old fellow's face never showed it.

That night we went to sleep with the throbbing of the drum in the great cave in our ears, its seven vibrations rolling out over the gorge and the mountains just as the sun sank beyond the westward peaks. I noticed that every Huichol, no matter what he was doing, dropped his work or his play immediately on the first note from the drum and went to the open space in front of the cave until the last sound died away amid the white peaks of the sierra.

According to El Chino, who told us all he knew of the tribe, morals are an unknown quantity until after a woman or a man is married, when liaisons are punished first with public whippings and then by expulsion from the tribe. Ojara

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added that this also was a custom of the Aztecs at the time of the Conquest. Above the door of each Huichol house is a hole about an inch in diameter; directly opposite this hole, in the rear wall of the house, is pierced another hole. Through these the house is supposed to breathe. Every house contains at least one image of the goddess Hikuli, which is strangely like the goddess of the wind found in ruins in the State of Oaxaca, farther south.

The following morning we were wakened at dawn by the drum, and, shortly thereafter, a Huichol boy arrived to conduct us to a pool in the stream in the canyon, where we bathed. Farther down stream we could see two or three hundred Huicholes of both sexes bathing. Indeed, so far as we observed in about a month with the Indians, they are the most cleanly of all the tribes of Mexico. Then we breakfasted with the sub-chief, who said his name was Hashi-neni, meaning, as near as we could get at it, man-who-kills-alligators. These Indians have no knowledge of coffee, but they make a sort of tea from the leaves of a sage plant which is not unpalatable. Sugar we brought with us, and the Huicholes liked it, but preferred to eat it as dessert rather than in their tea.

About seven o'clock a runner came in to inform the chief that all was ready for the hunt, and we set out on foot, armed with our rifles, while El Chino and Ausencio, the latter my mozo, proudly exhibited their carbines. Past the mouth of the cave we went, and dimly within we could see the priests moving back and forth, practising the cult of the Hikuli, about the only really pagan rite remaining in Catholic Mexico.

Behind the village, which, I should say, contained 1,200 inhabitants, and which was called Vishalika, as being the headquarters of the chief, we found a trail literally hewn out of the cliff and leading to the mesa above. This trail, in use probably for some eight or nine centuries, was worn deep in the center by the millions of sandaled feet which had passed over it, and, the chief leading, two of his assistants bringing up the rear and our little party of four in the center, we clambered single file up into a beautiful meadow, miles in extent, walled in on three sides by lofty but barren peaks, and guarded on the fourth by the sheer descent into the gorge.

On the way we christened the chief "Carlos"—Charlie—as being easier to say and to remember than his Vishalíka name. Arrived at the top we had walked some hundred yards when we put up a flock of wild turkeys. My mozo could not resist the temptation to try out his new gun, and let fly, injuring noth-

THE YOUNGEST "BRIDE" OF THE HUICHOL CHIEF, PHOTOGRAPHED JUST AFTER SHE HAD PUT ON A GILT BANGLE, GIVEN HER BY OJARA

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ing but the air, though the result was astounding. Not less than five hundred turkeys scuttling through the rank grass for distances of hundreds of yards on three sides of us, rose in flight to the nearest trees. There was no underbrush, and as the turkeys flew three little black-faced deer, and two black-tails, gigantic by comparison, bounded off into the forest. Small wonder the Huicholes, living as they do by the chase, should guard so jealously their vast natural game preserve.

We walked perhaps a mile and a half to where a spur of heavily wooded mountain came down to the meadow. There Carlos stationed Ojara and myself in stands of cut brush, evidently prepared overnight, each at the base of a pine tree and about fifty feet apart. He paid not the slightest attention to either of the mozos, and thereby gained their permanent ill-will, for they had come to consider themselves as much the guests of the Huicholes as were we ourselves. Then the chief took a place behind another tree, and Ojara and myself took our mozos one into each shooting box, to keep them from parading up and down the valley shooting at everything in sight.

Presently we heard a noise down the valley as if the whole tribe had gone on the warpath; then we noticed that the chief's two henchmen had vanished, and, just as we concluded that we were going to enjoy an old-time deer drive, the first deer came along. It was a doe, a white-tail as I remember, and I held Chino's too ambitious arm when he started to raise the rifle. Ojara also passed the deer, but not so the Huichol.

A HUICHOL HUNTER PHOTOGRAPHED IN NOSTIC. THIS PHOTO SHOWS TYPICAL BOW AND ARROWS, SASH AND POUCHES

Leaping from his blind, running bent double like some overgrown ape, the little Indian gained on the doe, which was listening and watching the drive in the rear, until he was not more than twenty feet from her gray flank. Then he straightened up, and with the same motion of his body drove the obsidian spear half way through the running animal. Terrified she dashed away, and, picking up the oak handle of the spear, from which the head had disappeared into the deer's body, he calmly lashed another blade in its place, taking the black, eight-inch stone from one of the pouches at his belt.

"Did he kill the deer?" I asked across to Ojara and El Chino replied:

"No; but the runners will get her when she dies."

Whereupon Ojara cuffed his servant, took the rifle away from him, and ordered him to shut his mouth for two hours, which the mozo did, promptly and thorough-

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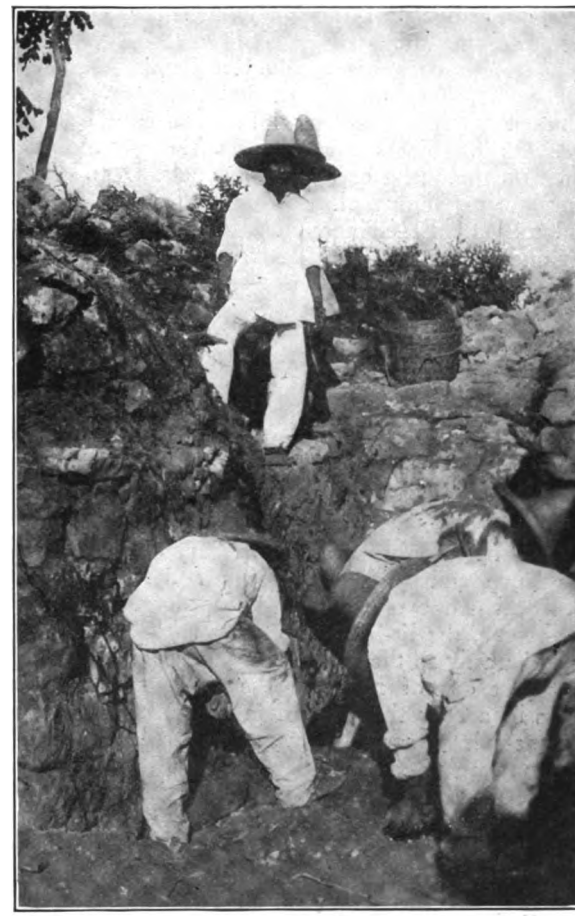
ly, for it is not good form in Mexico for a servant to speak unless he is spoken to.

Two or three little black-faced deer (brocket) passed, one of which I shot, and then came a big burra buck. The burra is the black-tail of Mexico, sometimes attaining a weight of 300 pounds, by far the heaviest deer of the republic. Having no brush to jump over, the black-tail was running, belly close to the ground, ears thrown back, and fine antlers laid almost along his neck. I drew down on him, when Ausencio, my mozo, took time by the forelock and fired his carbine so close to my ear that I thought I was deaf until I had the servant by the back of the neck, his rifle in my hand, and was informing him in good academy Spanish that his shooting was over for that day.



HUICHOL LABORERS IN A QUARRY NEAR ZACATECAS; NOTE THE CAUCASIAN OR CREOLE APPEARANCE OF THE OLD MAN WITH THE GOATEE

The beaters could be heard coming closer and the run increased. I found that Ojara had killed my black-tail cleanly, and was quite offended when I would not take the deer, saying that he merely killed it as a courtesy, because I would have killed it had I not been compelled to miss by the action of that son of a monkey, my mozo. Then I got two more brockets, a small burra buck and a large red fox, which stopped a second too long to snarl back over his shoulder at the beaters. Meanwhile Ojara killed a white-tail, missed another while I was shooting at a burra, and as the white-tail passed the chief's stand the little Huichol put an arrow completely through its neck. I had no idea there was such power in the little three-foot bow, but when, some three years later, I saw a Yaqui Indian's skeleton, with a Huichol arrow driven completely through the collarbone, I got a different idea.

By noon Ojara and I had eleven deer between us, and the number Carlos had wounded, and which were afterward retrieved by his runners, he placed at seven. To those who would criticise my only reply is that Ojara and I killed only bucks, and that everything of use about the entire bag was used, even to the horns, which were made into knife handles, arrowheads, and spear points. At noon we gave up our hunting boxes to the two mozos, while the thirty or forty Huichol beaters closed in through the meadow, routing out scores of wild turkeys, many foxes and coyotes, three bears which broke into the pine forest without passing us, and several more deer, one of which El Chino managed to kill with two shots, thereby increas-

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ing his prestige over the loudly-lamenting Ausencio.

As the beaters came round a little *cienega* (spring) in the meadow, they "flushed" a drove of seven wild hogs, the *javelines* of the Mexicans. As these came up the outlet of the meadow, Ausencio in my hiding place fired at them and missed. El Chino pulled the trigger and found that his rifle was empty, but the little chief, drawing an arrow clear to the head, drove it into the neck of the leading pig. The scream that followed halted the drove for an instant, and the Huichol, fitting another arrow, rushed out to finish the porker. Just then the *javelines* discovered the source of their troubles and charged. The Indian stood his ground until he had planted two arrows in two more pigs, but the barbs only increased the fury of the drove, and by the time Ojara and I had drawn our revolvers and leaped to the rescue, the little Huichol was sticking like a fly to the trunk of a pine, his feet just out of reach of the six-inch tusks of a boar that carried in his neck a stone-pointed arrow. Ausencio and El Chino were petrified with fear, and it was not until we had piled up four of the little hogs in a heap at the base of the tree that the remainder of the band stood off and grunted at us, without offering to charge. More lead finished them, and, as the beaters came up, we gathered the game, sent runners after the wounded deer, and returned to the village, arriving about two o'clock in the afternoon, satisfied that the Huicholes knew something about deer hunting.

One of the runners had captured a rock python about seven feet long, alive, and presented it to the *shamensi,* while three others had been stung by the poisonous yellow scorpions, but had cured themselves by eating Hikuli, and, aside from a little nausea, were as well as ever next morning.

We rested that night, spent the next day catching a small fish, some sort of bream, I believe, in the river with some Huichol boys, as the chief had some rites to perform with the priests, and in the cool of the evening learned more of the customs of the tribe from Carlos and from El Chino, who seemed to have a surprising memory for one who had been so long away from his tribe.

That night we cleaned rifles, and for a week thereafter hunted through the hills, sometimes with the chief, sometimes with guides he delegated to pilot us. The chief appeared to have some sort of court to hold with the priests once a week, and to attend rather strictly to his duties. We saw no drunkenness, and could find no jail, though any quantity of *tesguiño* was drunk, and El Chino informed us that three public floggings for theft occurred. The women for the most part chose their own mates, with the exception of the "brides of the chief," as explained in a footnote to this article.

The chief showed an aversion to discussing the religion or politics of his tribe, and, as he provided us with all the comforts of life, as he knew them, we did not press our questions. On the ninth day of our visit, he appeared at the door of the house shortly after the drum had beaten its call to life, and apologized for not having shown us more attention during the week. This pow-wow, which I found to be quite a ceremonial, once finished, he announced that two mountain lions had been seen by Huichol hunters about five miles from camp, on a rocky shioulder of the sierra. Would we care to help him kill them?

Gathering up our rifles we followed him again to the mesa, where some seventy Huicholes, armed with bows and arrows and stone knives, with here and there a *machete,* the first we had seen of these knives in the tribe, awaited us. Every man was provided with some sort of noise-making instrument, whistles, rattles, and drums, while one carried a five-gallon kerosene can and a stick with which to beat it. After a walk of about two hours, covering, I should say, some seven miles, for we walked rapidly as the grass would permit, we came to a low mound, evidently covering a ruin of some sort, about 150 feet in height, and topped with three high pine trees. Midway up this hill could be seen the brush covered mouth of a cave, or a ruined doorway, the supposed den of the pumas.

The beaters surrounded the base of the hill, while Carlos, Ojara, and myself went straight up the side hill, a trifle

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HALF-BREED HUICHOL GIRL IN NOSTIC

ahead of the beaters, toward the mouth of the cave. The Huicholes took no dogs, though I noticed several mongrels in the village. Half way up the hill we put up a pair of ocelots, little, long-tailed, spotted cats, looking like nothing so much as young jaguars. I fired at one and missed; Ojara shot the other as it bounded over a log, and broke one of its hind legs. El Chino dispatched it with a blow over the head from his carbine.

The shots woke all the sounds of the forest, and in the next hundred feet we had the satisfaction of seeing the yellow-gray body of a puma slipping through the brush ahead of us. Ojara urged me to shoot, as I had several good opportunities, but I preferred to wait and see the method of hunting the big cats followed by the Huicholes. We gained the cave, with the mountain lion somewhere in the brush ahead, only to find that it was a ruined doorway to some ancient stone building which quite probably formed the base of the mound, and that it was only about five feet in depth.

While we were in the cave the beaters gained a little on us, and, as we came out, a terrible hullabaloo greeted us from the other side of the hill. Later it developed that the beaters had come on the female lion devouring a goat, and one of them had wounded her with an arrow. Instead of fleeing she turned on the man, mauled him considerably while the other beaters shot arrows into her, and then fled through the line, bearing all the way from three to fifteen arrows, according to the stage of excitement of the teller of the story. The ever-present Hikuli was applied to the man's wounds, which, being mostly on shoulders and arms, were not serious, and three men were detailed to take him back to a spring and there bind up his scratches with toad weed.

The hill growing small, the line of beaters thickened. A halt was called to capture a small rock python, about five feet in length, and then, as we pressed on toward the top, we were delighted to see the remaining puma gain an open spot at the top of the hill, turn to look at us and then take to one of the big pines. There he lay along a large limb, where he could see us and we could see him. Unused to firearms, he apparently was more afraid of the noise of the beaters than of the weapons the little Indians carried. About twenty-five yards from the big cat I suggested to Ojara that we give the chief a chance with one of the carbines. Accordingly I showed him how to hold, sight, and pull Ausencio's gun.

The first shot, which startled the chief about as much as it did the lion, missed, but the second, taking the puma in the shoulder, shattered the bone and swung the cat around on three legs to where his

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CLAY IMAGE OF THE GODDESS HIKULI, THE VENUS OF THE VISHALIKA, AND THE RULING DEITY OF THE TRIBE

whole flank was exposed. The Huichol gravely returned the rifle, announcing that he preferred his bow, and he and four of the beaters sent arrows into the side of the puma. Again we were surprised at the strength of their bows, for the arrows were buried at least two inches under the skin. One of the stone blades must have penetrated a lung, for the puma started coughing, and, in a last desperate effort, clambered completely to the top of the pine, all but out of accurate range of the bows.

Then the chief and two of his men, dropping their bows, looked to their stone knives and started to climb the tree, whereupon I sent a soft-nosed bullet into the lion's head, and he came slithering down through the branches, quite dead when he struck the ground.

The Huicholes saved the skin and the skull of the lion. The former went to me, and the latter was given to the priests, I suppose for use in their rites. We had three more such lion hunts during the following two weeks, and a tiger hunt which resulted in nothing, though the puma chases ended in kills each time. Jaguars are comparatively scarce in the Huichol country, but mountain lions and bears are plentiful, all of which leads up to the bear hunt which came near costing Ojara his life. There are three kinds of bears in the Sierra Nayarit—grizzlies, as large as any which ever trod the Rockies; so-called "silvertips," smaller than the grizzlies, but more dreaded by the Indians because of their propensities to attack men alone in the mountains, and the small brown and black bears, one and the same variety, with mere differences in pelage.

The best bear country is about fifteen miles from the pueblo of the Vishalika, and we struck out one Monday morning before daybreak, Ojara and myself mounted, one mule carrying our blankets, ammunition, and cameras, while the mozos walked with the Huicholes. The country was so rough that we afterward wished we had walked, also, but we had much sport in the open meadows trying to ride down turkeys and deer, and once a pair of ocelots, one of which Ojara was lucky enough to shoot with a revolver.

Arrived in the bear country we found it densely forested with pines, with here and there a meadow, and the slopes dotted with sharp, needle-shaped peaks of granite, absolutely bare of all vegetation. In these peaks were many caves, and in these caves dwelt the bears, while the valleys were filled with rabbits, rats, mice and a sort of ground squirrel. The rocks and trees contained many bees, and, all in all, it was a paradise for Bruin. With the aid of our glasses we saw three bears feeding about half a mile from the temporary camp we established, and setting out after them, ran smash into a pair of silvertips wandering aimlessly around a peak which had been split into two jagged pinnacles by some long past earthquake. The Indians had named these *jame-jame*—the twins—and declared they were haunted by *las hadas de los gigantes*—the ghosts of giants.

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We surrounded this peak, but one of the bears, the female, broke through, and snarling under the sting of three arrows, turned back. The Huicholes promptly gave ground, shooting at her meanwhile with their arrows, and hurling spears at her ineffectually. Finally Ojara and I firing at the same time as she reared back on her haunches, brought her down and started a friendly argument as to whose bullet had been fatal.

The male bear, meanwhile, had retreated into the crevice between the two peaks, where we could hear him growling. Ojara proposed that we should settle the dispute by going after the other bear, the one who killed him being entitled to the credit for killing both. I agreed. He took one peak and I the other, and both arrived at the top at almost the same moment. There we could see that the gash between the two rose rapidly, and was about twenty feet wide where it ended at the stone ligature which still bound the twins together. There, his back to the rock wall, stood the bear, while Carlos and several of the Huicholes poured an ineffectual fire of arrows at him from one hundred feet back in the crevice. Both our mozos understood the rivalry between Ojara and myself, but the Huicholes did not; therefore El Chino and Ausencio kept out and stood leaning on their carbines.

"You shoot first," said Ojara, with regulation Mexican courtesy.

"No," I replied, "you are going to miss anyway, so shoot."

He refused, and we decided to match coins for first shot. Ojara took a *peso* from his pocket and flipped it in the air. "Call it!" he shouted, while the bear, rearing on its haunches, waved its great head from side to side trying to watch us and the Huicholes at the same time.

"*Cabeza!*" (head) I shouted back at him, and just then the coin bounced from the rock and went slithering down toward the bear. Ojara took one step after it, his feet slipped from under him, and in a second he was hanging head downward from a jagged point of granite, his face not three feet from the jaws of the silvertip. The Huichol chief saw it all, and, before I could even fire, he snatched a spear from the nearest Indian, dashed with a great shout straight at the bear, and, disregarding the outstretched paws, drove the stone spearhead a good foot into the great chest.

Instantly the bear forgot the man hanging above him, his paws raked the back of the brave little Indian, and, just as he gathered the Huichol into what would have been a last embrace for the hunter, my gun cracked and a soft-nosed ball took off half of the top of the silvertip's head.

We restored Ojara to his feet and carried Carlos out on the grassy hillside, where water from the ever-present gourds of the Huicholes soon revived him. Standing over the brave little Indian, Ojara took off his broad-brimmed *sombrero* with a flourish and a bow.

"You killed both bears," said he. "I always was a poor gambler."

"Let's see," I replied, being suspicious of the spear, and, while the Indians applied Hikuli to Carlos's wounds, we dragged out the bear. Slashing down the abdomen and skinning the chest, we opened the heart cavity and found that the obsidian blade had sliced the heart clean in two and the great animal must have been dead when my bullet hit him.

Returning to the *pueblo* we found that it was the day on which the pilgrims and the head chief were to reach the scene of their ceremonial at Real de Catorce, and the Huicholes were in gala attire to celebrate also. This celebration lasted seven hours or thereabouts, each day, beginning at nine o'clock in the forenoon and lasting until about four in the afternoon. The ceremonial was religious, but at night the people gave themselves over to dancing, eating, drinking, chanting, and our fireworks.

After several minor hunts for wild turkeys, deer, and ocelots, Carlos having entirely recovered, we distributed our beads and other gifts, leaving the bugle with Carlos, after teaching him to blow it, though not very tunefully, and returned to Nostic the way we came. The Huichol chief accompanied us as far as the mouth of the gorge above Nostic, and there bade us an affectionate—for an Indian—farewell, urging us to return when the "spirit of hunting again moved us to the mountains."

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THE FIGHT AT CUT BANK

HERE is the story as old Three Bears told it—with many haltings and stumblings and much arguing with his interpreter. We were in his tepee at Browning on the Blackfeet reservation with the afternoon sun slanting down across the mountains that he had known as warrior and hunter all the eighty-odd years of his life. To-day a big summer hotel stands where the Blackfeet lodges once traced their circle near where Two Medicine Creek breaks out of the mountains. A tourists' camp nestles beside the Cut Bank where Three Bears fought his fight. The story is dim with an old man's fading memory and broken with his impatience at the white man's insistence on certain details that to Three Bears's mind were irrelevant and unnecessary. But first he must make it clear that he was ever a man of peace.

"It was my father who taught me," he said. "Many years ago he died ('over sixty,' the interpreter put in) but I remember what he told me—always to be gentle and just. More than eighty years I have lived here and not a one of all the tribe can point to a harsh word I have spoken or an unkind act.

"I never loved fighting and never fought except for a good cause—as when the Sioux raided our ponies or the Cheyennes came into these mountains for our buffalo. Once at St. Mary's I held my enemy in my hand. He wept like a child and prayed to me as though I were a god and I let him go. Another time at Two Medicine my foot was on the neck of a Sioux. He made the sign of peace and begged me to send him back to his wife and his little son and I turned away from killing him.

"But in the fight at Cut Bank there was no time for mercy or for question. It was in the time of the buffalo and I was young and my first fight was to come. No one knew that the Sioux were in our country till they came down on us in the early morning. The fires were lighted and the buffalo meat was on the coals. Our women and children were with us, for we were in our own land and there had been peace for a long time. All were resting about the fires except only a few of the young men who had gone down the creek to bring in the ponies.

"Then they came, the Sioux, shouting and shooting and stabbing, and before we could turn our heads or raise our hands they were among us—many, many more than we were, and half of ours were women and children. They drove us back among the tepees, where we dragged them from their horses and killed them hand to hand. Our women fought and even the children with their feeble strength. I have said that it was my first fight, but I was as an old warrior with no thought of fear or of weakness. Twice I killed my man when his knife was at my throat and once I turned and killed my enemy behind me as I turned.

"But mostly it was cut and strike as though it was in the darkness of night and the grunt of our enemy told when the blow went home. Perhaps we had lost but for the young men who had gone for the ponies. We were few, as I have said, and we tried to shield our women and children. But our young men heard the noise and came at full speed, shooting and yelling our warwhoop and thundering into the fight.

"Then the Sioux turned faint, for they feared that the few were many and they hated an even fight, so they fled—as many as were able. Many stayed and their bones are there under the grass of the Cut Bank valley to-day. Forty and more we counted of our enemy, and of our own dead but seven. We mourned those seven long, for one of them was our chief, Many Horses, and with him went one of his wives. And that was my first fight."

That was how the old man told it in his tepee at Browning. His life had covered the whole history of his country, from savagery to civilization, from the buffalo to the railroad and the automobile. A little while and he will be gone and there will be none to remember the old days.

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THREE BEARS, THE BLACKFOOT
A link with the old days of wildness and war

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From "Wilderness Pets."

SUKEY SWATS THE RAVEN

WILD PETS

By EDWARD BRECK

ILLUSTRATED WITH PHOTOGRAPHS

Getting on Domestic Terms with the Wild Things of the Forest and the Air

THE title that has been chosen above is a misnomer, since most of the pets I shall yarn about, though born wild, were speedily tamed. Concerning the ethics of taking young birds and animals from their mothers and bringing them up in surroundings strange to their ordinary lives I have ruminated considerably, having been born with a New England conscience. In common with all true sportsmen—I trust I may reckon myself among them—the lust of killing, strong enough in early youth, has departed with the years, and while I will still deliberately take animal, bird, or fish life whenever I consider the reasons sufficiently strong (as, say, in the case of a hunger for trout), the occasions when I do so are becoming rarer and rarer. But it is odd that I do not outgrow the fascination of keeping wild things in durance, though by no means vile, especially as I have always had a horror of caged things.

> "A linnet in a cage
> Puts all nature in a rage,"

sang an old poet, Blake, I think. The Zoo is no doubt of great educational value, and hence justified, but even a caged canary has ever filled me with indignation.

The explanation is this: my rule is to keep my pets in captivity only so long that they shall become able to forage for themselves and recognize "Camp Buck-

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BABY BLACKBACKS

shaw" as their home. Almost the only exception to this rule is in the case of bears, for which I have a large house with an extensive, wire-enclosed run. In this, however, they are confined only part of the time, for when at home I always let them have the run of the place, keeping an eye on them lest they should stray into the settlement and frighten poor souls to whom the name bear means man-eater.

In the case of sea-gulls the question of the comparative advantages of a natural and a Camp Buckshaw education came up acutely. I have for many years taken from the nest just after hatching and reared to maturity, or rather until they departed for the salt water about the first of September, two great black-back gulls. There was, of course, not much difference in the feed of the wild and tame schools, though probably my gulls got a little more to eat than their wild brothers and sisters. The latter had the advantage of the example of their parents when it came to flying, but this was ever one of my beliefs, that anything a man or beast teaches himself, anything in fact that he does in life without help, is better learned than of a teacher.

For a long time I hesitated as to the truth of this theory when applied to gulls, but during the last few years I have taken my gulls from a near-by lake, so that I have had the advantage of watching the development of both my gulls and of those left in the nest. The first year I seemed to notice that the wild young one swam better and appeared a little more vigorous than its captured brothers, but the next season the reverse was the case, so that I have been unable to decide this question. The truth is likely to be that there is very little difference.

THE CUBS SPAR

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THE END OF A HUNDRED-YARD DASH FOR FISH!

In flying it was a joy to observe the young gulls teaching themselves, with their preliminary hops and runs, a little higher and a little longer each week, until the first feeble wing-strokes were taken in the air. At first I did nothing to aid them, and I am sure that they learned to fly quite as fast as did their brothers brought up by the parents. When mine could negotiate a few yards I took them to the top of my two-story pier and launched them into the air, an advantage in education which I am sure was good for them and which their brothers did not enjoy.

There was another question, however, in regard to their future. Would not their tameness bring them in danger of being shot by the guns of that creature that Dr. Hornaday, I think, calls the great destroyer, man? I hope not, but the chance is there, and I regret to say that I have heard of many men who habitually shoot these most beautiful and useful birds merely as a wanton pastime. I have never actually seen this done. I believe that if I did, and I had a loaded shotgun in my hand, I would deposit that charge of shot, not where the famous chicken "got the axe," but in a part of the "sportsman's" anatomy that would be so out of commission that he would patronize a stand-up lunch-counter for a long time!

One result of my studies of young wild life is a conviction that there is practically nothing taught young birds by their parents that they do not acquire by themselves almost as readily and well. I believe the importance of the old ones' example is much exaggerated. Instinct is almost all-powerful. Witness the flying of my tiny gulls, and also the significant action of a porcupine called Julius Cæsar because, like the great dictator, he was "untimely ripped from his mother's womb" after she had been shot. His first act on seeing the light of day was to slap with his tail,

LIGE EXPRESSES HIS OPINION OF SUKEY

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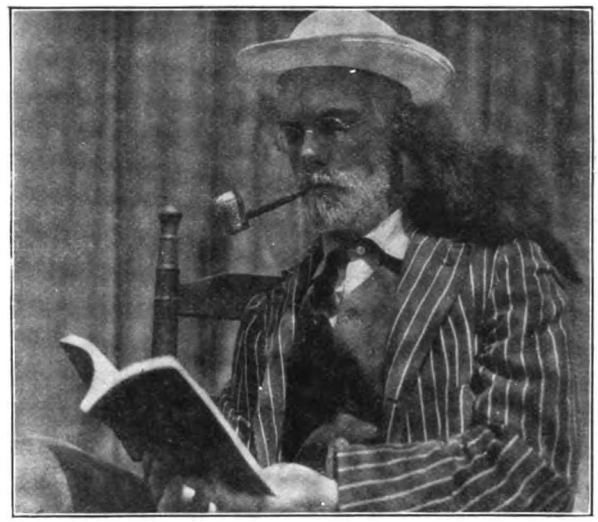
the porcupine's one aggressive method of defence, for, unless actually seized, it does not use its teeth, which are entirely capable of inflicting nasty wounds, as I can testify from long experience.

Mr. W. H. Hudson denies that the nestling has any instinctive knowledge of particular enemies, "but is taught to fear them by the parents." An absolute refutation of this statement was offered by one of my little gull-pairs, hardly ten days after being hatched. Like all of their kind they were singularly fearless. For example, a very obstreperous and cocksure Collie came bounding down on to the dock where the tiny chaps were sedately sunning themselves. The suddenness of the attack and the accompanying barking might well have inspired fear, but what happened? Far from being even alarmed, the two little gulls made a dash at the dog, one pecking him in the nose, while the other pulled several hairs from the end of his tail, so that he beat a quick retreat with his tail between his legs!



HIS FAVORITE PASTIME

At about this time we noticed that, once in a while, the gulls did exhibit unmistakable signs of fear, huddling together and casting alarmed looks in the direction of a huge pile of rocks on shore near the dock. For a day or two I could make out nothing, but on the third, by dint of keeping concealed, I discovered the bright eyes of a half-grown mink watching the gulls from a hole in the rock-pile. The mink is one of the few enemies of the gull breeding in fresh water, but there had been no parents to teach these youngsters the fact; instinct did that quite effectually. I may say that this mink, fortunately not yet adult and hence timid, was the only thing the gulls feared. They chased the cub bears away with ease, and the cat gave them a wide berth.

CALF-MOOSE DRINKING

I do not mean to say that the example of the parents is not in many ways beneficial to the young, but

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LIGE WANTS HIS DINNER

I am sure that instinct is nearly sufficient to bring them up satisfactorily.

As I write another baby porcupine, Augustus Cæsar, is trying his best to shin up my leg. He is but three weeks old, and was also taken from his dead mother, but thrives wonderfully. His chief delight is to mount from the floor to my shoulder, with many a grunt and croon, and to establish himself there. If he can get at the lobe of my ear and nurse it his happiness is complete. He complains piteously when removed, but his teeth are getting too sharp for comfort.

What curious creatures the porcupines are, to be sure. Only inscrutable nature could tell us their object. It cannot be ornamentation nor usefulness, for they are about the ugliest, ungainliest, and most destructive beasts that exist. Their life is one long, continuous eat-and-sleep performance, and they don't even have to climb trees to get their food, though they like to spend their time in the trees, both for food and protection. The only reason for their existence I have ever heard given is that of the old woodsmen, that they were placed in the forests to serve as food for lost and starving men. I have never heard of an actual case of this kind, though no doubt there may have been such. There were once two men near here who got lost and did actually live on porcupine flesh for a day or so, but, had it not been procurable, they would have found something else, and they had not yet tried their belts and moccasins!

What a difference between these uncouth, antediluvian animals and the handsome seagulls! It is a complete contrast between beauty and ugliness, grace and awkwardness, usefulness and destructiveness. And there is another difference, which I respectfully refer to the members of the Peace Societies and others who erect wonderful buildings of the imagination on the shifting basis that nature is something different from what honest men find her, especially human nature. The life of the seagull is one long, hard fight for existence; not a scrap of food does it get unless it wrests it from its eager fellows, or is quicker on the swoop. The baby gulls fight like—well, like baby gulls.

How about the porcupine? He *never* fights. The most he will do is to indulge in pushing matches accompanied by snarls and whines. Believe me, no man, no animal, no creature of any kind,

YOUNG HAWK WITH A SQUIRREL

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yes, and no nation, can approach perfection without a fair lot of fighting (not all of it on the stricken battle-field), for competition stimulates both body and soul.

But to descend from heroics to the commonplace again, the instinct of the individual creature to struggle for its own existence is accompanied by episodes that are often comic, often tragic. Young gulls seem to be especially attracted by anything resembling raw meat, and young predatory birds still more so. Children with bare legs or feet cannot approach my gulls with impunity; the bare flesh looks too much like raw fish or meat. One of their drollest habits is that of swallowing each other's feet. I have often been called out of the cabin by a series of agonized squawks and squeals, only to find that one gull had swallowed the other's leg clear up to the body. A mighty jerk was usually enough to free the leg, leaving the partially eaten one none the worse for the experience, but very angry.

The tragic side is shown by the fate of a little hawk, whose nestling brother was much larger and stronger. On returning from an absence from camp I found the little fellow limp and "dopy," with the down all picked off its head and one foot swollen and bleeding. The larger one had probably taken the other's head, which had a small bald spot on it, for something edible, and the head appearing redder as the down was picked off, the attack continued until it was too late to save the little Cooper's life.

My families, while I trust always "happy," have never altogether become so intimate as to lie in one another's laps. Hawks are on trial with me now as pets, and I regard their inclusion among my favorites as a somewhat doubtful experiment. Only the other day I was obliged to rescue one of the young crows from a hawk, which, seeing the gaping red mouth of young corvus, and taking it no doubt for a piece of meat, made a rush and grabbed the poor victim by the bill. If not interfered with it would probably have killed the little crow.

And when birds of a feather do not flock together awkward incidents are apt to happen. I once had two frisky kittens, Yankee and Bluenose, who were wont to skylark in a tree with a young porcupine of that year's breed. It was amusing to see how gingerly the kittens would buffet the quillpig in their play, and all went merrily until one day Bluenose lost her hold of a limb and fell a couple of feet squarely upon young Mr. Erethizon, whose quills were "in being," though not apparent to the naked eye. The accident rather broke the friendship, for Bluenose gave the little black fellow a wide berth thereafter.

They Never Learn

It is a trifle curious that wild animals have not been "educated" to the porcupine. It would appear that if, as certain nature writers insist, the young are instructed extensively by their parents, one of the chief points in the curriculum would be the necessity of avoiding the ungainly black gentleman who goes quietly about his destructive business. But no; the panther, the lynx (both gray and red), the mink, fisher, and bird of prey, not to speak of the lowly "yellow" dog, all fall victims to their gluttony. I once found an owl, still alive but very "dopy," who resembled a pincushion, its body, wings, talons, eyes, beak, and throat being pierced with countless quills. It must have swooped down on the porcupine with terrible *élan,* and recoiled filled fuller with quills than was Arnold von Winkelried with Hapsburg lances.

Strange to say there is one creature the skin of which a porcupine quill will not penetrate, the fisher-cat or pekan, though its hide may contain many of them. Into the flesh of all other creatures the quills will gradually work, often until they strike the heart, for every movement drives the barbed shafts farther in.

The question of training up hawks in the way they should go has its awkward side. I notice that when my farmer neighbors visit me they cast dubious glances at my little hawks. I usually tell them the birds are Cooper's hawks, which means nothing particular, whereas the word "hen-hawk," applied by the countryside indiscriminately to all the

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falconidae, would occasion frowns. Chicken-farms are all about me, and I am curious to see whether my pets will raid them first-off. My object is to train them as falcons, *à la* Lady Vere de Vere, but though the Cooper is a strong and swift flier and savage to a degree, I am not sure whether he has enough "noble" falcon blood to play the game fairly.

By the way, Dr. Hornaday, in his excellent "American Natural History," says of Cooper's hawk, "This bird inhabits the whole United States, but stops at the Canadian boundary." Even the good Doctor, like the great Homer, sometimes, though very seldom, nods.

And here we have Mr. Job and others, grand naturalists all of them, telling us that the hootings of the owls "are their love-notes, their mating-cries," while in another place it is said that the owl's loud hootings begin in the autumn. Now I cannot make out the hooting of owls or the drumming of grouse to be real mating-calls, for though the grouse drums and the owl hoots in the mating-seasons, they do the same at almost all other times. I have heard grouse drum in every month, even in midnight in late November, and quite as often as in May or June; and anybody who has been moose-calling knows that owls seem to be in their best hooting form in September and October, often bothering the huntsman sadly with their noise. The truth seems to be that the drumming of the grouse and like habits are merely the wont of the bird to "show his independence," like the strut of the gobbler. It is no real mating-call, like, for example, the call of the cow-moose, which is heard only at the mating-time.

Owls make very amusing pets, but lose the "happy family" knack as they grow older. A friend of mine had one that he wrongly kept tied to a stake by a cord. It was of that "tiger of the north woods" species, the great horned owl, and while apparently quiet, not to say sleepy, in the daytime, blinking with those great yellow eyes in the manner that has made the country people believe they are sightless in bright light, he had a surprising way of "coming to life" whenever there was any particular reason for doing so. My friend had a favorite kitten that usually gave the owl a wide berth, but one day it strayed within the danger zone. The result was that the apparently somnolent mass of brown feathers suddenly galvanized itself, a powerful claw shot out, a piteous mew was heard, and then—*finis felis domesticæ!*

The smaller owls make much nicer pets, especially the little screechowls. When a lad I had one that followed the members of the family about the house, its favorite perch being on my mother's head or shoulder, where it went to sleep most contentedly. Poor little Solomon —he ate some ham and passed on to the land where nice, fat mice cover the blessed ground. I shall never forget the commotion in the bird world when we set him in an apple tree near the house. It seemed as if hundreds of birds of all sorts gathered in a minute and filled the air with their strident protests. They would buffet him grievously, too, often nearly knocking him off his perch, and all this while the innocent little chap was wondering what the matter could be.

Raven vs. Crow

Ravens and crows offer an interesting contrast, the former being not only larger but much more dignified and clever, at least while very young. I had a specimen of each kind of exactly the same age, but the difference in deportment was striking. While the crow was continually squawking for food with open mouth and fluttering wings, the raven, Lige, treated his small companion with indifference, even contempt. As the raven was considerably the larger, Jim took him, no doubt quite naturally, for his parent, and followed Lige everywhere.

The only occasions when the crow seemed to possess any interest for the larger bird was when, at feeding time, Jim would open his mouth and beg the raven to feed him while still having his bill full of food. At such times Lige would deliberately pick the food out of the crow's mouth and swallow it. It

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is an instance of the crow's stupidity that it cannot tell whether it is fed until it actually feels the food deep down on its palate, its parents pushing it well down its throat. Then that curious tongue, with its little fleshy edges pointing downwards, draws the food into the gullet.

It was curious that Lige, who scorned the attentions of Jim Crow, was apparently enamored of my cubs, which he pestered continually, hopping about and investigating everything they did. He would steal their food if they gave him half a chance, which exasperated them so that they would chase him away, snarling at him in rage when he jeered at them from the security of a nearby limb. To mix matters up, the cubs were in deadly fear of the cat Yankee, one of whose kittens they ate up the day after it was born. The next day Yankee took the three remaining kits, one by one, to the inn, a full quarter of a mile distant, and hid them in the middle of a folding-bed! As a rule she would ignore the cubs, but when one of them, in the exuberance of his spirits (and such spirits as cubs have!), would attempt a little play with her, she would turn and cuff him well.

On one occasion she did something that I never happen to have seen a feline do, namely, take her master's part in an altercation. Sukey, the most incorrigible cub I ever saw, had sinned and I started after her through the brush round the camp. But a cub can get over the ground in very remarkable form, and the chase was a long one. All at once Yankee came bounding out of the camp, passed me, and was up on that cub like a "hawk on a June bug"! And how she did cuff him!

Lige also was no friend of Yankee's, and her appearance was enough to make him ruffle up his feathers and give vent to language such as I have never heard from a well-brought-up raven before or since. And a raven's vocabulary is extraordinary. Its voice has tones that are extremely human, and I have often been fooled by them in the woods. One of my particular friends is the guide, Charles Charlton, whose voice is a clear tenor. On more than one occasion I have got extremely out of patience with Charles, when we happened to be separated in the woods, because he would sing out, over and over again, "Doctor! Doctor!" and then deny having done so when we met. "Oh, it was those blessed ravens that fooled you, Doctor!" he would say. "I saw a lot of 'em flyin' round." And he was right.

Two of my cubs were beautiful boxers, squaring off at each other in the most classic manner. I mean the old graceful manner, say, of Billy Edwards, before the crouch was invented. The cubs indulged in no straight-arm blows, but their round-arm swings were wonderful, and Jim Corbett in his best days never ducked better.

If I had more space at my disposal I should like to tell you about my moose-calves, but perhaps it is just as well to avoid the subject, since I have become convinced that calf-moose should never be interfered with. After long experience and gathering of testimony, I am sure that a calf, if handled at all, will be likely to starve, because its mother, smelling the dreaded man-odor, will not allow it to nurse for a period long enough to be fatal to the calf. The finding of the bodies of two calves known to have been caught and photographed convinced me of the truth of this. And it is very hard to rear them in captivity anyhow.

The rearing and study of wild pets is a most fascinating diversion, but it should be indulged in only by those whose occupations allow them to be at home constantly, for only constant attention will result in anything but failure, which means suffering to the innocent little ones, far worse than death.

May I recommend the last remark to the ladies who have not yet learned that furs are totally unnecessary luxuries? And will they believe me when I tell them that nine-tenths of the furs they wear are taken in steel-traps, at the expense of a lingering, agonizing death of the beautiful animals? If I had my way steel-traps would be illegal.

But here comes Augustus Cæsar, crooning for his milk. Surely there never was such a ludicrous sight as this diminutive, globular plantigrade actually cantering down the path.

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THE HOPEFUL FISHERMAN

By CHARLES BARNETTE WOLF

A True Tale That Reflects the Experience of Many More Men Than the Author

I HAVE just made my first attempt at fishing in an Oregon stream. I've tried it in the lotus swamps of Illinois and the mud rivers of Iowa, the lakes of Idaho and the streams of Washington, the ocean deeps of the Catalina Islands and amidst the breakers of Puget Sound, along the lordly Mississippi from the Minnesota lakes to Cairo, up the Cumberland in Tennessee and on the Frazier in Canada. Lastly I've tried it on the Rogue, at the foot of Table Rock Mountain, in Oregon. I haven't caught anything to speak of yet—but still have hopes.

I should qualify that last statement. Once, away back in the stubbed-toe era of my life, the folks sent me to the woods pasture to cut thistles. I fished in the creek all afternoon with a bent pin and caught eighteen bullheads, but didn't dare take them home. I haven't had any luck since.

I do not even blush to say that the most ordinary scrub has sat alongside me in a boat and caught fish so fast that his reel got hot—while the most that came to me was a carload of snags and a sunburnt nose. As captain of a snagboat it would be hard to find my equal—no snag would escape with me in command—but a salmon cannery that depended on me for its supply would probably be shut down for the next three or four thousand centuries.

I go on a fishing trip every time there's a chance, however, and get as much enjoyment out of it as anyone. In fact, if enjoyment had bulk or weight the boat would be swamped that had me in it. There is one advantage about enjoyment—you don't have to clean it or fry it or pick the bones out and, except on rare occasions, you don't have to lie about where you got it when you get home.

After one has tried fishing in nearly every thing from a bathtub to the Pacific Ocean and used every sort of contraption from a bent pin to a seine, and baited with everything from grasshoppers to prairie dogs and from fish eggs to bullfrogs, and caught nothing, one may as well look at the matter philosophically. Therefore, the absolute truth will be adhered to in this tale.

In order, however, that the poor, struggling life insurance companies may have opportunity to collect a few more premiums on the writer's policies he refrains from mentioning the names of the auto party that whizzed away from Ashland, in the picturesque Siskiyous, at early dawn. For convenience let them be known as The Colonel, The Attorney, The Professor, The Boy Wonder, and The Writer.

A few characteristics of each will do no harm. The Colonel insists that he came West for his "nerves." The remarkable thing about this is that he is a newspaper man and still speaks of the ailing portion of his anatomy in the plural. The Attorney came West for his "digestion" and is noted for never taking a case till he has rubbed his hands over his stomach and consulted his fishing calendar. The Professor is an old woodsman now devoted to selling bait and tackle and instructing amateurs in the art of drowning the one and hanging the other on the surrounding shrubbery. The Boy Wonder is—according to his own statement—so famed as a fisherman that the mere mention of his name causes fish of mature years to hide in fright.

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We reached the historic Rogue while the sun yet lingered behind the distant mountain tops. There's a thrill in the morning air of southern Oregon as it comes to you laden with the scent of the pines and the myriad flowers. There's a thrill at sight of the turbulent stream that battles its devious way past many a boulder that strews its pebbled floor. You cease to wonder, as you gaze, that the redskin fought for it and died for it when the white man came. Gold is in its depths from source to mouth—as many ancient "diggings" still attest—and the bones of many a grizzled miner bleach in the gulches that it drains. No more beautiful stream was ever given the king of game fish for a home and in no stream does he thrive more prolifically. "The Rogue" is well named—for it entices the sportsman roguishly, and oftentimes enfolds him in its icy depths.

You can fish as you like in the Rogue —with spoon or fly or salmon eggs or all three—and unless you're a hoodoo to the fishing game you'll make a catch to talk about for years to come. I happen to be a hoodoo. I used to think it was something odd in my looks that scared the fish, or that they felt hurt because of my disinclination to wade out and meet them face to face and mingle with them in their homes. But they had no complaint on that score this time. I waded right out—and stepped on a slippery stone and sat down among them and offered to scratch their backs.

I looked like a regular sport, too, as the brisk waters rippled through my blue overalls while summer zephyrs toyed with the assortment of trout flies that decorated my hat. I made a pleasing picture—with Table Rock, scene of famous Indian fights, in the background—waist deep in limpid pools or breasting the riffles with the sang-froid of a veteran and whipping the waters like two women killing a snake.

I kept one eye on The Professor and duplicated all his movements. At times my tackle got mixed with the wearing apparel of a friend or clung to submerged debris or fluttered from the branches of adjacent trees, but otherwise Izaak Walton would have been proud of me. So far as my appearance and action were concerned any fish with sense enough to come in out of the wet should have been proud to have his scalp adorn my belt and my failure to catch anything is a mystery.

The fish were there and there was not a dub on the river who handed his flies and spoons around more gracefully or generously. I offered the best assortment of fisherman's junk on the market to every fish that showed his nose but there were no takers. Thirty-pound salmon jumped six feet in the air to look at me and trout of all sizes and shapes and colors disported themselves about me. I waded the river from nine in the morning till five in the evening —with goose pimples as big as barnacles adorning my submerged propellers—and didn't even catch a cold.

We All Know It

Now, as a general thing, the waters my friends take me to have no fish in them when we get there. The fishing may have been fine there the day before and it may get good again the next day, but when they hear me coming the fish nearly always climb out on the bank and hide in the woods. When they do stick around something always happens to keep me from catching them.

The Attorney tells me he went fishing for flounder in Coos Bay once and speared eleven hundred pounds in one night. He says flounder burrow into the sand and all you see is a blister on the bottom of the bay. You spear the blister and drag out a flounder. On a trip like that it would be my luck to flounder around all night with eleven hundred pounds of spears and come back with a blister.

I was trembling on the verge of catching a fish on several different occasions on my trip to the Rogue, but something always happened. I tried to look backwards once and watch The Professor land a steelhead and stepped on a slippery stone and got my legs tangled up in my line. I was after a thirty-pound Chinook that time and if The Professor hadn't made so much fuss over his steelhead the salmon and I would have looked

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like that famous trademark on the bottle of cod-liver oil.

The next time business looked good The Boy Wonder came splashing down the river after a slabsided old hen salmon. He had scared her off the nest and she had taken his pole away from him. He had only 150 feet of line and when he had that all let out and the fish wasn't satisfied he threw the pole at her and lit out for shore, where a decrepit boat was gathering moss. The owner was afraid somebody would try to travel in it and get drowned, so he had it locked to a log.

By the time The Boy Wonder had pried it loose and got another fellow to help him, the salmon was forty rods down the stream. She wasn't in very good health and was traveling slowly, so they overhauled her. She had a triple hook in her mouth that kept it open and she was badly waterlogged when they hauled her ashore with shouts of triumph. Of course the fine fish that was about to surrender to my wiles got scared and left.

A short time after that a big steelhead and a rainbow trout and a thirty-pound salmon were quarreling as to which should get on my hook first, when The Colonel and The Attorney came down the river in a leaky boat, whooping and yelling for somebody to head them off.

They had been fooling around out in the current, taking turns smoking a corncob pipe and bailing the boat with a tomato can, when a salmon got snagged on a hook that The Attorney accidentally let fall into the river. They didn't know what to do with it any more than a boy with a snapping turtle on his toe.

They both wanted to hold the pole at once, and nearly upset the boat. The Attorney said he saw it first, but The Colonel put up the pathetic plea that if he didn't catch a fish his wife wouldn't let him go again. In the meantime nobody was bailing the boat and the fence-board oars had floated away. The Attorney finally gave The Colonel the pole and grasped the tomato can.

There they came down the stream, with the boat swinging from side to side. The Colonel was hunched down in the prow, like a frog on a hummock of bunch grass in a swamp. The pole was a twelve-foot jointed affair about the size of a streak of sunshine. The Colonel had it planted between his legs and was hanging on with bated breath, trying to wind the reel both ways at once. His cob pipe was upside down and the hot ashes were sifting into his open shirt front.

The Attorney was on his knees in an attitude of prayer—bailing with one hand and punctuating his orders to The Colonel with the other, as if he were giving an imitation of Dewey at Manila Bay. Every little while he would get his hands mixed and nearly drown himself or The Colonel by punctuating an order with a can of water. Both of them were in the last stages of buck fever.

I saw it was up to me to save them from going over Ray Gold Dam, and calmly waded in and shooed the fish up on a sand bar. The Colonel and The Attorney collapsed, when the strain was over, and had to be carried to shore. I left them with their arms around each other's necks and the fish in their laps, crying and laughing hysterically, as they patted each other on the back.

No Escape from Trouble

After that it seemed to me a better place to fish, in a genteel and orderly manner, would be up around a bend of the river far from the madding crowd. I had just got nicely located and was fishing as serenely and quietly as if it were the heart of the Sahara Desert—and just about as successfully—when something butted in from up the river.

It burst upon my privacy without knocking and never even offered to introduce itself. My first evidence of its presence in that part of the world was a streak of red that appeared to be trying to get some place and was several hours late. The streak was caused by an animated red sweater. It had a pair of human legs waving around from the bottom of it and a man's head sticking out at the top. I learned afterwards that the object was a male human.

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It seems that he hooked a big salmon and it started down the river. He followed, hanging to the pole. When they came to a sharp curve in the river bank he thought he could head it off by cutting across the elbow of land. He cut across all right. He also cut a dido and a gash in his scalp.

Just as he started across the elbow, his line caught in his reel and—being busy untangling it on the run, in order to give his fish more rope—he failed to note an offset in the plateau of small, smooth rocks over which he was gamboling. He found the offset all right. He even told me, afterwards, that he had fished around there for years and knew it was there all the time.

The probabilities are, however, that its location is now more firmly impressed upon his mind. When he stepped off into it he inadvertently left one of his legs up on top of it, at an angle of about forty-five degrees. This caused him to go through a movement as if he were unjointing his back and trying to scare his gizzard out from under his diaphragm. His eyeballs came out and looked at each other across his nose and his pole broke off and stuck into the ground about two feet.

After that he stood on the side of his head in the loose stones for a few seconds and turned around on his ear. His legs and arms were in the air and he looked like something planted. After that he sort of wilted and fell over. I had just started over to hold an inquest when he raised his head to see if anyone was looking.

His fish, of course, got away—along with several that were contemplating making a deal with me. I asked the fellow why he didn't get his act copyrighted and sell it to the moving-picture shows, and for half an hour he held his head in his hands and thought it over. He said he was dizzy.

I have come to the conclusion that if all the fish in Lake Michigan were nailed to the bottom, and the water poured out, they would probably wiggle loose and get away when they saw me coming. It's not that they are afraid of me—they romp around me as if we were brother and sister—but when it comes to swallowing a hook, they either go over and patronize some dub at the other side of the river, voluntarily, or something happens and they decide to look around a while longer before investing with me.

A fish swallowed my hook by mistake, one time up in Minnesota, but when he came to the surface and saw who was holding the pole he kicked up his heels and galloped off. I saw him the next day, still lugging the pole around and showing it to his friends. I might possibly catch a dead fish in a basket—if someone were to throw it to me real carefully—but when it comes to catching live ones, with a hook and line, there's nothing doing.

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THE RIGHT FIELD GLASS

By EDWARD C. CROSSMAN

Some of the Things to Avoid and How to Get the Best Use Out of Binoculars

MINE has gone with me to army maneuvers and down to the sea in ships; to Mexican rebel camps and the desert ranges after sheep, and to the frozen lakes north of the boundary for caribou. It has worn a bit brassy at the corners, and the leather is shabby, but the "look" part, inside the tubes, seems unchipped, untarnished, and undimmed.

I am moved by much experience with the glass in the field, and by much tinkering with various makes and powers, to attempt to chart the way for those who fancy the field glass a desirable addition to their outfits.

Essentially, ignoring the more technical features, such as power, field, and the like, the ideal field glass is the modest, unobtrusive one, weighing nothing, catching in no brushy fingers as you walk, taking up no room, but showing you what you desire to see when the time comes. It should be a pocket-knife sort of an instrument, out of the way, out of sight, and out of mind until it is needed. This does not mean a two-pound affair, nor a pair of telescopes with nine-inch tubes, nor yet one contained in a case which dangles from your shoulders and halts you firmly at every point where there is something "seizable."

My own, the type used by many of our officers and recommended for their use by the U. S. Army Signal Corps, which tests out field glasses, weighs eight ounces, is eight power, is of the prismatic type, and measures three inches in height—front lens to rear one. It slips into a pocket of the ordinary olive drab army shirt and there it rides, safely covered by the buttoned flap, until it is needed.

Weight and bulk are not all-essential features of a good glass. A ship captain or the commander of a battery or field artillery may be pardoned for using the largest object glasses made and ignoring everything save ability to see as much as possible as late in the day as possible, with utter forgetfulness of the weight and bulk that is entailed. The sportsman or the mere lover of the outdoors has no such life-and-death reason back of his choosing of a glass.

Modern binoculars or glasses commonly used in the field are made in two entirely different types, one the direct vision, without prisms, and with a tube loaded with lenses as a shotgun shell is loaded with wads; the other much more compact power for power, using the simple and brilliant astronomical eyepiece and a prism for erecting the image which the object glass insists upon delivering upside down. Through the elimination of complicated erecting lenses and through the folding of the light rays within the tubes by the prisms, such glasses are far superior to the old type. Also, sadly enough, they cost more.

The features of the prismatic glass are, small size, great field, and great illumination, as compared with the old type of glass. Also they are made with hinged tubes by which the user can adjust the eyepieces to the distance between his eyes instead of vainly endeavoring to get two slightly overlapping circles to coincide, as happened when a person whose eyes did not track with the lenses used the old type. In addition to this, one of the eyepieces is fitted for separate focusing in case the eyes are not alike, and when this is done the main tubes are focused as with any ordinary glass, both eyes seeing perfectly.

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Glasses having a magnification of more than eight are classed as high power. By the magnification—marked on the instruments by little figures such as "8x"—is meant that the glass actually magnifies an object lineally as many times as it is marked. That is, an eight-power glass would make a foot-wide brick chimney apparently eight feet wide.

It stands to reason, like a lot of other things that really don't stand to reason at all, that if a glass magnifies twelve times, you can see twelve times as far as with the naked and unabashed eye, and therefore said twelve power is ahead of the eight-times instrument beside it on the showcase.

High power, unless the object glasses are enlarged and the glass made more bulky, means decreased light. It means increased shake, the tremble of your hands, or perhaps of the ship on which you are sailing, being magnified just as is the object at which you gaze. The field of view is cut down just as is the light.

As a matter of cold, sober fact, backed by long experience in other climes than sitting on a clubhouse piazza with the feet on the railing, a six-power, prismatic glass is a far more efficient instrument in the hands of the outdoor man under all sorts of conditions than is the ten or the twelve.

I find by inquiry that the absolute and infallible test of a glass by the purchaser is to see what size letters can be read across the street from the optician's shop.

It isn't. The real test is a climb up a long and brushy hill until the breath comes a hundred to the minute, then a snatch for the glass, reposing in a shirt pocket, to see whether the buck is the one you want before you fire. If it won't go in your shirt pocket, it is not the glass you want; others are made that will. If it shakes in your agitated hands, it is not the glass you want; you cannot see enough more with a high-power glass to pay for the times when it is unusable because you cannot hold it steady.

Getting to figures, a well-known glass of fine optical properties and of the prismatic type, with the object glasses—the lenses at the outward end—of 1 1/32 inch diameter, gives a relative brightness of 18 in six power. The eight-power glass of the same dimensions gives a brightness of 12, and the twelve-power glass gives a brightness of 5, not a third that of the six. It could be increased by using large object glasses, but this in turn entails bulk and weight of the entire instrument.

In field of view, the six power gives 125 yards at a distance of 1,000 yards, the eight power a field of 100 yards, and the twelve power a field of 64 yards. Thus if you keep your twelve power to reasonable size, you pay for the power by giving away 70 per cent of your illumination and half of your field of view.

A common error among field-glass users is to suppose that the field of view depends on the size of the object lens. The relative brightness does, but field of view is dependent on power and on design of glass, not on the size of lens. A two-inch lens in a twelve power gives but a 70-yard field, as compared with a field of 125 yards for an inch lens in a six power.

What the Army Uses

In the United States Army the infantry officers rarely go over eight power when they purchase prismatic glasses. The non-commissioned officers and other enlisted men who need glasses are given direct-vision instruments, far larger than the smallest of the prismatic instruments. These army glasses give four and six power, the change being made by turning the glass over and causing a small supplementary lens to slip into or out of place.

A field glass built to give access to its inner works, the prisms and lenses, is desirable, but not essential, except in tropical climates, or perhaps in very cold ones where change of temperature might cause sweating on the lenses. My own have never been taken apart in three years' constant use, some of it in desert dust.

The brown leather covering, affected by makers who supply glasses to the armies, is preferable to the black, showing wear to a less extent and apparently wearing better.

A glass for all-round use by the lover

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of outdoors should not weigh over twelve ounces, nor be too large to slip, uncased, into the pocket of the ordinary outing shirt. A glass necessitating a case in which to carry it will be left at home as a nuisance most of the time, just as surely as its novelty wears off.

It is not a bad idea to line with some sort of perspiration-proof material the left-hand pocket of the outing shirt, having a pocket flap and button to prevent the baptizing of the instrument in the first pool over which you bend. I tried chamois, but it is not good, sticking to the glass and not being properly moisture-proof.

Supposing the prospective glass buyer has made up his mind and has finally taken a prismatic instrument, six power if for a hunter, eight for all-round use. The first step is to sit down with the elbows on the knees, rack the tubes out as far as they will go, and then with the eye opposite the adjustable eye-piece closed, carefully rack *in* the tubes until the open eye says the glass is in focus. This is the proper way to focus a field glass, never the other way of racking *out* the tubes until the focus is sharp. The latter process gives a focus, apparently right but a bit off, putting the eye on a strain and causing headache. Also when the glass is racked in, it must be stopped the *instant* sharpness is attained, else the eye-strain point is reached by passing beyond the correct point.

When the open eye says things are sharp, and no more, then open the other and see if it agrees with its mate. If not, then adjust for this eye by the movable eye cup, screwing it in or out until, when the tubes are racked in, the glass comes in sharp focus for both eyes at once.

The tubes should be pulled apart or pushed together on their hinge until the eyes see one clear circle, without a sign of the two overlapping ones seen when the inter-eye distance is not right.

To really see things with a field glass, it should be carefully focused, then the two index fingers brought back and curved around the outside of the eye-cups, supplementing them in keeping out the rays of light.

It is well not to become too extravagant in one's declarations of the distances over which one can see, or the things that one can see over said distances. It is an unfortunate fact in optics that the normal eye can define nothing smaller than one inch for each hundred yards. That is, with perfect conditions one should be able to define a five-inch circle at 500 yards. As a rule even this cannot be done.

Keeping the theory, however, then one should be able to see an object only an eighth as large, with an eight-power glass, or conversely, see the same-sized object eight times as far. From this, due to absorption of light in the glass, it is necessary to deduct about 15 per cent, so your formula would be with an eight-power glass eight times the inch per hundred yards of the naked eye, minus 15 per cent. That is, if you could see a four-inch bull's-eye at 400 yards with the naked eye, then you could see the same bull's-eye with the eight-power glass, at eight times 400 yards, or 3,200 yards — minus 15 per cent or about 2,700 yards.

As a matter of actual fact you can't do anything of the sort under ordinary climatic conditions, nor do I believe it would hold true even in the desert. Therefore, be guarded in your statements, nor believe, in the innocence of your heart, any yarn about long-seeing until you put it to the test of the inch-per-hundred-yards formula.

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THE WORLD OF SPORT

Climbing Mt. McKinley

One would think offhand that it was a perfectly simple matter to determine when a mountain had been climbed. In our innocence and ignorance we had supposed that this was the case. Now arises an apparent confusion over the climbing of Mt. McKinley. This feat was accomplished over a year ago by Prof. H. C. Parker and Mr. Belmore Browne. To be exact, their party reached the summit of the mountain on July 1st, as described by Mr. Browne in this magazine in April of the present year. In the same issue Mr. Browne explains how the misapprehension has arisen as to the reaching of the "summit." The summit of Mt. McKinley is not a peak in the ordinary sense, but a rounded dome. The Browne-Parker party reached this dome in the midst of a howling blizzard. Had the weather been fair the problem of determining the exact highest point on this dome would have been as simple as walking across the street. As it was, the weather was so cold and the climbers so exhausted that they paused only long enough to make sure they had really reached the top before beginning their descent.

The Essential Facts

To cavil at the performance or to object to their claim that they had reached the top of the mountain is to ignore the essential facts of the case. It would be as reasonable to accuse Peary of falsification because he could not reduce his polar observations to exact feet and inches. The work was done when they had reached the dome referred to above and no later comers—however well their work may be authenticated—can take from them the glory of having been the first to reach the summit of Mt. McKinley. To argue otherwise is to leave the whole question in abeyance for fear some later climber may find an ice hummock fifteen or twenty feet higher than the first arrival hit upon.

The Rise of Polo

Polo seems to be going ahead rapidly in this country, largely as a result of the success of the Meadowbrook four against the English. The play at Newport was distinctly on a higher level than it has ever been in the past and several of the games were little below the grade of international contests. The Cooperstown aggregation were obviously the leaders, not only on the scoreboards, but in the field at all times, but there were other teams that were not far behind. The Army is coming forward at a gratifying rate, and the Army team gave a good account of itself on the Point Judith field. With proper encouragement from the Army authorities, particularly in the way of greater opportunities for real competition throughout the year, the Army players would undoubtedly increase greatly in numbers and in effectiveness of play. Polo is pre-eminently a game for constant team practice. In no other way can a high degree of efficiency be reached. The Army has the horsemanship and the love of the game. Give the younger officers the proper chance and next year there will be plenty of competition with Lieutenants West, Wilson, Quekemeyer, and Moose for the honor of representing the service in the championships.

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Leveling Up the Play Among the civilian players first honors for individual as well as team play probably belong to Cooperstown. Such men as Rumsey and Burke are treading fast on the heels of the famous four of Meadowbrook, much faster than the handicaps at present indicate. Stevenson is coming forward at a sweeping pace and Ambrose Clark is still a factor. In fact, the present summer has seen a great change in the polo situation in this country, chargeable in no small part to the thrilling outcome of the international matches in June. At that time Mr. Reed, writing in this magazine, declared that a great gulf yawned between the Meadowbrook team, with one or two substitutes, and the rest of the field. The statement was absolutely true at the time and no one could possibly foresee the startling effect of victory. The gulf has disappeared, and Meadowbrook would probably be put hard to it to-day to defend their laurels against one and possibly two other American combinations.

The New National Game Best of all, the play of the revivified teams is cast in the very best modern models. It is fast and accurate, a combination of the hard-hitting, hard-riding variety with a modicum of the safe English game. Milburn has been an inspiration for backs throughout the country and the effort is constantly to hit the ball up past number three and to storm the other goal with as few strokes as possible. This style of play is open to the objections always to be brought against pace in any game, but the virtues are patent. When it is good it is mighty good and when it is bad anyone can beat it. The way to insure its being good a sufficiently large percentage of the time to turn the balance in our favor is to spread the game of polo. It should be the ideal American game. As a nation none excels us in admiration of good horses and we are proverbial in our fondness for rapid action in sport. Polo meets both of these requirements fully.

California Everywhere This California tennis is growing tiresome. Six national championships in one year are too many. To be sure, the East gathered in one, the Interscholastic, California having kindly refrained from entering any competitors for this event. For good measure the Californians gathered in the Longwood and the New York State championships and the Western title in doubles. Incidentally they must be credited with the California championships also. To recapitulate is to tire the ear with repetition, for it is the old story of pace. The players who could hit the ball hard and accurately won against the conservative game. It is doubtful if McLoughlin has ever risen to more compelling heights than in the finals at Newport against Williams. Again and again the Philadelphian forced him out of position and outmaneuvered, only to bow to superior speed and stamina. In the last set the Californian gave a brilliant exhibition of marksmanship, driving the ball to the far corners with a speed and accuracy that left his opponent standing still, out of reach of the ball. As an index of the character of his play he lost only one set in the seven matches at Newport, that being the one which went to Williams in the finals at a score of 7—5.

Where Condition Counts The question arises of how long McLoughlin and players of his type can last at the fast game. Will he be playing in the first rank when he reaches the age of, say, Dixon, or even Wilding? The answer depends on McLoughlin himself. His present game is essentially a game of youth. He is only twenty-three, and, barring accidents or disabling illness, should have a good many years of fast tennis still before him. But his supreme performance requires supreme condition. As he said at Newport after the National: "I have had three months of continuously hard tennis against the greatest players in the world. It has been a terrible task to keep in condition and always be at my best, as has been necessary." Here is one of the problems. Modern tennis demands that a man shall have the stamina and the fitness of a distance runner. Pedometer tests have shown that in a hard set a player covers a distance of approximately two miles. Along with this is a be-

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wildering amount of hard hitting, quick turning, stopping and starting, with a tremendous nerve strain that can hardly be computed by any method at present known. Carry this over a five-set match, and one can make a rough guess at the reserve force in a player of the McLoughlin type which enables him to hold his pace all the way and finish at top speed. It is almost equivalent to doing a mile run at the speed of a quarter-miler.

A Question of Brains The future is a question not only of sheer stamina, but also of headwork. Had Mathewson had nothing but his speed and curves he would long since have passed out of the Big League. As he felt his effectiveness diminishing in one direction he set to work to compensate for this loss by improvement somewhere else. Hence his fadeaway and his reliance on the team behind him. The tennis player has only himself to fall back upon, but there are ways in which he can prolong his period of effectiveness. Probably a few years will see McLoughlin taking a leaf out of the Bundy-Johnson book and mixing chop strokes with his hard drives and his smashes. Then there is the method of Larned in his later years. This player so perfected his marksmanship at the far corners of the court that he usually had his opponent running up and down the baseline in a vain effort to keep pace with the ball. In time, too, the older members of the California school will likely find a placed service almost as effective in pulling the opponent out of position as sheer speed and a sharp break.

National Golf As this issue goes to press, the golfers of the country are gathered at Garden City for the national amateur championship. For the first time in two years Mr. Hilton will not contest for the American title, but he has sent an excellent substitute in the person of Abe Mitchell, the artisan golfer, runner-up to John Ball in the British championship last year. Mr. Mitchell is a long driver and a steady player. If he survives the first two rounds with their chances of an unreasonable upset before the field has settled down, he should come through close to the top of the list. Travers, of course, is the favorite among our own players, with Evans a close possibility. This year much is expected of Heinrich Schmidt, the Massachusetts boy who gave such a good account of himself at St. Andrews this year. In such a large field, though—one hundred and forty-five entries—prophecy is foolish and anything may happen.

Harry Vardon We are glad to welcome Harry Vardon back to these shores again and with him Edward Ray. These two men, with the addition of Braid and Taylor, are unquestionably the foremost professional golf players of Great Britain and inferentially of the world. Much is expected of Tellier, too, the great Frenchman. It is several years since we had the pleasure of seeing Vardon before, but he is the same Vardon with the same great ability and the same unaccountable lapses into mediocrity on the putting greens. His first play—at Shawnee—was anything but remarkable and honors fell to McDermott, whom the newspapers are fond of labeling "the homebred." Vardon was missing short putts with all his old ease and good temper. The next week at Cleveland he rose to heights of greatness and cut the record for the course from seventy-two to sixty-seven and on the next round to sixty-six, establishing a thirty-six-hole record of 133 against the old mark of 155. This was Vardon at his best, a model of effectiveness and control.

Freak Golf Shots Of freak shots in golf there is no end. Playing on a summer course in New Hampshire, a player pulled his drive into a small river that ran close to the green. The ball struck a stone and bounded back on the green, converting into a chance for a two and a sure three what should have been a lost ball. The reports assure us that the rock which was struck was the only one within "bounding" distance of the green, but this sounds suspiciously good. Playing in the Western championship at Homewood

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last July, Mr. E. P. Allis, of Milwaukee, made a two hundred and ninety-yard hole in one. In the open tournament at the Shawnee club in August two players in the same match ran down for threes on a hole only a few yards short of six hundred. In England a player who made a certain hole in one promptly established an endowment of five pounds for the hole, principal and interest to go to the next player accomplishing the same feat. At last reports no one had claimed the money.

New York Racing The revival of racing in New York State has demonstrated to the satisfaction of the casual observer at least that this sport is possible without the betting ring. The meeting at Belmont Park was declared an entire success, both from the standpoint of entries and of attendance, and the same thing seems to have been true of the longer season at Saratoga. This should make all good lovers of the horse rejoice. But only constant watchfulness can keep down the evil of the bookmaker in one guise or another. It was possible to place bets in New York City without great trouble while both meetings were in progress. This statement is not based on first-hand knowledge, but on information that has every earmark of reliability. It is probably impossible to prevent sporadic betting. For our part, we are reactionary enough to believe that it is no business of the State to attempt to do so. When the betting rings and the poolrooms have been abolished, along with all the other machinery of public gambling, the function of the State has ceased. Other forms of betting are a matter for the individual conscience. We hold no brief for gambling, and have no sympathy with its followers. It is merely that we resent shrewish attempts to regulate private conduct in all details. Furthermore, we are mighty glad to welcome the thoroughbred back to paddock and track.

Game Law Correction The necessity of closing the forms and the difficulty of securing exact information promptly caused several mistakes to appear in our summary of the game laws last month. A few corrections follow which should be noted by sportsmen. In Arizona the open season on deer and turkey is from October 1 to December 15; quail, snipe, rail, October 15 to February 1; ducks, geese, brant, September 1 to April 1; doves, white-wings, June 1 to February 1; antelope, goat, elk, sheep, bob-white quail, grouse, pheasants protected. The bag limits should be changed to two deer per season, twenty-five ducks and thirty-five doves or white-wings per day, and three turkeys per season. In Connecticut woodcock were listed as protected owing to a typographical error, when in reality there is an open season from October 8 to November 23. The season on sandpiper, plover, and snipe is from September 1 to December 31. In Delaware the bag limit of rails has been reduced to fifty per day, all other birds twelve per day, and of rabbits, hares, and squirrels six per day. In Florida the new regulations provide an open season from November 20 to February 20 on deer, squirrels, wild turkey gobblers, quail, doves, swans, geese, brant, ducks, rails, coots, mudhens, sandpipers, curlew, snipe, and plover. Ruffed grouse and pheasants are protected to 1915. The new bag limits are: 1 deer, 2 turkeys, 20 quail, 25 birds of any other species per day; 3 deer, 5 turkeys, 500 other game birds per season. In Wisconsin the opening date on birds should be changed from September 10 to September 7, with due regard to local exceptions. It is understood that the Federal law applies to migratory game birds after October 1 of the present year. In all cases the shorter season controls, whether prescribed by Federal or State law.

Football This Year Spectators at football games this year will have little difficulty in recognizing the game. Few changes have been made in the rules, the most important being that which permits a kick being made from any point behind the line of scrimmage, instead of from five yards back. This will add materially to the versatility of play and give increased opportunities for a skilfully masked attack. Another change of importance is that which per-

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mits a player who has been removed from the field to return once at the beginning of any period or at any time during the fourth or last period. Formerly he could return only at the beginning of a period. As an indication of the persistence of old phrasing it is only within the last year that the phrase regarding the snapping of the ball back with the feet has been removed, although the practice has been obsolete for years. In case of a punt-out, if the punter advances beyond the goal line or nearer the goal than the point at which the touchdown was made, he shall be penalized by being moved five yards farther away from nearest goal post along the goal line. Neither is he allowed to draw his opponents out of position by a feint without giving them time to return to position before actually making the kick. The other changes are merely for the purpose of greater clearness and make no real changes in the play. This gratifying state of affairs should result in improved play this year, especially in more varied maneuvering and a faster attack.

No Army-Navy Game It is a source of deep regret to all lovers of football that the threatened break between the Army and Navy should finally have come. It has been announced with every appearance of definiteness that the efforts to reach an understanding as to the place to play have failed, and the Army has signed a contract with the Carlisle Indians for a game at West Point on the date usually reserved for the Navy game. It would seem that the difficulty could have been patched up, inasmuch as it was only over a question of proportion and amount of tickets. To be sure, the Army has long felt that the Navy had a little the better of it at Philadelphia in distance from home. A shift was made to Princeton in 1905 without satisfying anyone. The Army has repeatedly proposed New York as a central meeting point, but the Navy has objected. It would seem that a compromise could have been effected by alternating between New York and Philadelphia. The normal solution would have been to limit the admissions still more and play alternately at West Point and Annapolis, thereby making the game purely an institutional matter, as it should be. The contest at Philadelphia is an interesting spectacle from the standpoint of the crowd, but is too often mighty poor football. This is the third break in the series, the first having been from 1893 to 1899 and the second in 1909, when the Army cancelled after the death of Cadet Byrne. The victories now stand nine for the Navy and eight for the Army. The loss of the Navy game leaves the Army without a single first-class game on its schedule for the present season.

NEWS OF THE OUTDOOR WORLD

Golf and Tennis

THE national championship in singles was won by Maurice E. McLoughlin, of California, defeating R. Norris Williams, of Philadelphia, in the finals 6—4, 5—7, 6—3, 6—1. Recapitulating the play, McLoughlin had 137 points to his credit against 125 for Williams, six aces to six for Williams, 36 places to 48, 30 outs to 48, 35 nets to 40, and six double faults to seven.

The national doubles championship in tennis was won by Maurice McLoughlin and Thomas C. Bundy against John Strachan and Clarence Griffin in straight sets.

William M. Johnston, of California, won the New York State Championship in singles, defeating S. H. Voshell, of New York, in the finals by 6—4, 6—4, 4—6, 6—2. The doubles championship was won by R. D. Little and F. C. Inman against S. H. Voshell and F. C. Baggs by 6—1, 6—0, 7—5.

Richard Harte, Jr., of Philadelphia, won the Maine singles championship, defeating Edgar Scott, also of Philadelphia, 6—3, 6—4, 5—7, 6—4.

The Rhode Island State championship in singles was won by E. H. Whitney, of Boston, captain of the Harvard tennis team, defeating

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H. A. MacKinney, of the Agawam Hunt Club, 6—3, 7—5, 6—1.

The finals of the White Mountain tennis championship were won by James Nowell, of Boston, against H. E. Hale, of Randolph, Mass., 6—4, 6—3, 7—5.

Harry Vardon, the English professional, playing over the Mayfield Club Course in Cleveland, reduced the record of the course for thirty-six holes from 155 to 133. The two rounds were 67 and 66, respectively, the club record previously having been 72.

The Metropolitan Open Golf Championship was won by Alec Smith with a total of 291 for the four rounds, Thomas L. MacNamara, of Boston, being second with 292.

The open golf tournament at Shawnee, Pennsylvania, was won by J. J. McDermott, with a total of 293 for the four rounds, Alec Smith being second with a score of 301. Harry Vardon returned a total score of 306 and Edward Ray 308.

The woman's golf championship of Chicago was won by Miss Ernestine Pearce, of Calumet, by a score of 5 and 4 against Mrs. J. G. Latimer, of Homewood.

The Bretton Woods final was won by L. A. Hamilton, of Englewood, by one up against J. W. Yuile, Royal Montreal.

Clarence Griffin, San Francisco, won the Western tennis championship in singles, defeating J. J. Armstrong, St. Paul, 6—4, 6—0, 4—6, 6—4.

Polo

THE senior championship at Point Judith was won by Cooperstown, defeating Meadowbrook 8½ to 4¾. The Leopards won the final match in the Army and Navy cup series against the Army four 8 to 7¼.

Cooperstown defeated Point Judith in the open championship for teams without handicap. The score was 7 to 2¾. Cooperstown also won the junior championship against Great Neck by a score of 10¼ to 7. Still another victory for Cooperstown was in the finals for the Atlantic cup in which they defeated the Leopards by the narrow margin of 10½ to 9¼.

The Westchester cups were won by the Sandpipers against the Philadelphia Country Club by 9 to 8. Philadelphia also lost to the Perroquets in the match for the Thorn cup by a score of 10 to 7, although the winners conceded five goals on the difference in handicaps.

On the Water

IN the Canadian Henley the junior eights was won by Detroit over Hamilton. The senior eights went to Winnipeg. The senior singles was won by Robert G. Dibble, of Toronto.

A. Y. Gowan's cruiser *Speejacks* won the special race at Put-in-Bay against Carl Fisher's *Shadow*. The race was over a thirty-three mile course and the winner covered the distance in one hour 7 minutes 31 seconds.

The Quincy cup for sonder boat classes was won by the *Ellen*, owned by C. P. Curtis, of the Boston Yacht Club, three races out of five.

The motorboat championship of America was won at Chicago by *Disturber III*, owned by James H. Pugh, *Baby Reliance* being second. The time for the thirty-mile distance was 42:47.

The Gold Challenge Cup at Alexandria Bay was won by *Ankle Deep*, owned by Count Mankowski. The winner was then shipped to England to take part in the races for the Harmsworth trophy.

Miscellaneous

TWO long-standing marks in track and field events were wiped out by Pat Ryan and Hannes Kolehmainen at Celtic Park, New York, in August. Ryan broke Matt McGrath's record for the sixteen pound hammer by more than two feet, throwing the missile 189 feet 6½ inches, and Kolehmainen clipped nine and two-fifths seconds off George Bonhag's record for the three miles, doing the distance in 14 minutes 22 3-5 seconds. This is within four seconds of the world's record held by Alfred Shrubb.

The black mare, Dudie Archdale, owned by S. F. Jones, established a new three heat trot record for the mile at Detroit by doing the distance in 2:04¼, 2:04½ and 2:04½.

Lieutenant Suglio, of the Italian army, established a new military record in an aeroplane by reaching a height of 10,000 feet during a 320-mile cross-country flight from Turin to Rome.

Captain S. F. Cody, an American aviator but a naturalized English citizen, was killed by the fall of his aeroplane at Aldershot, August 7th. Mr. Cody had been engaged in the development of an army aviation corps under the direction of the war office.

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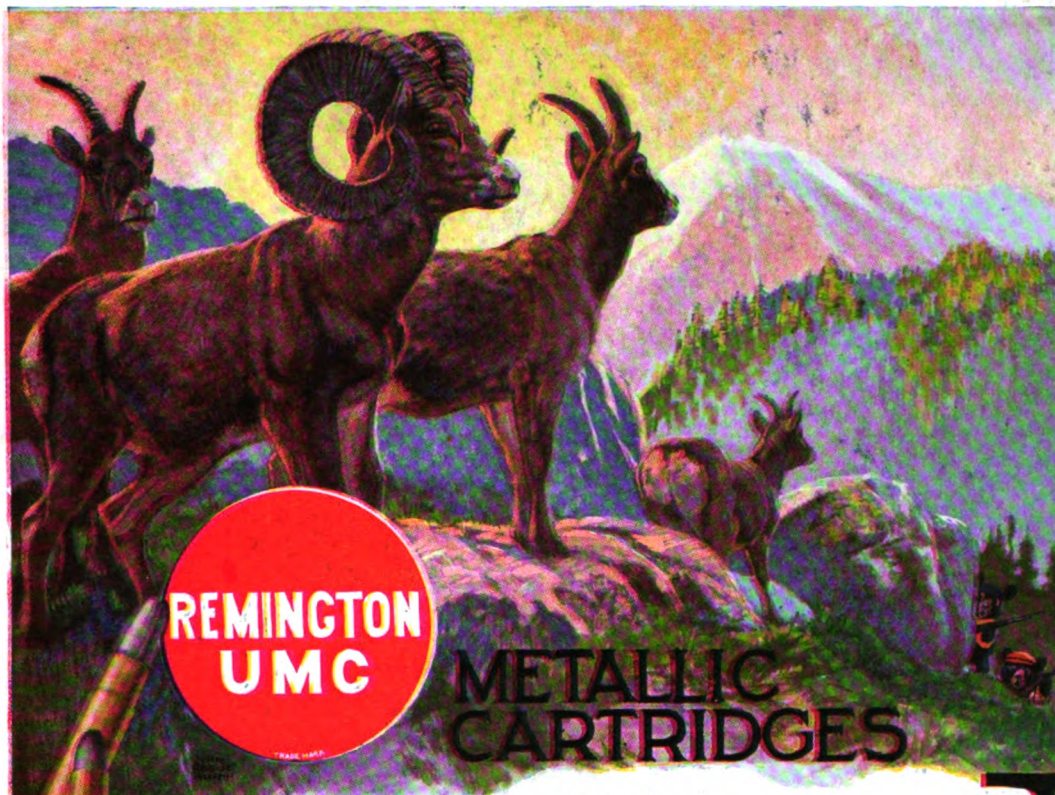

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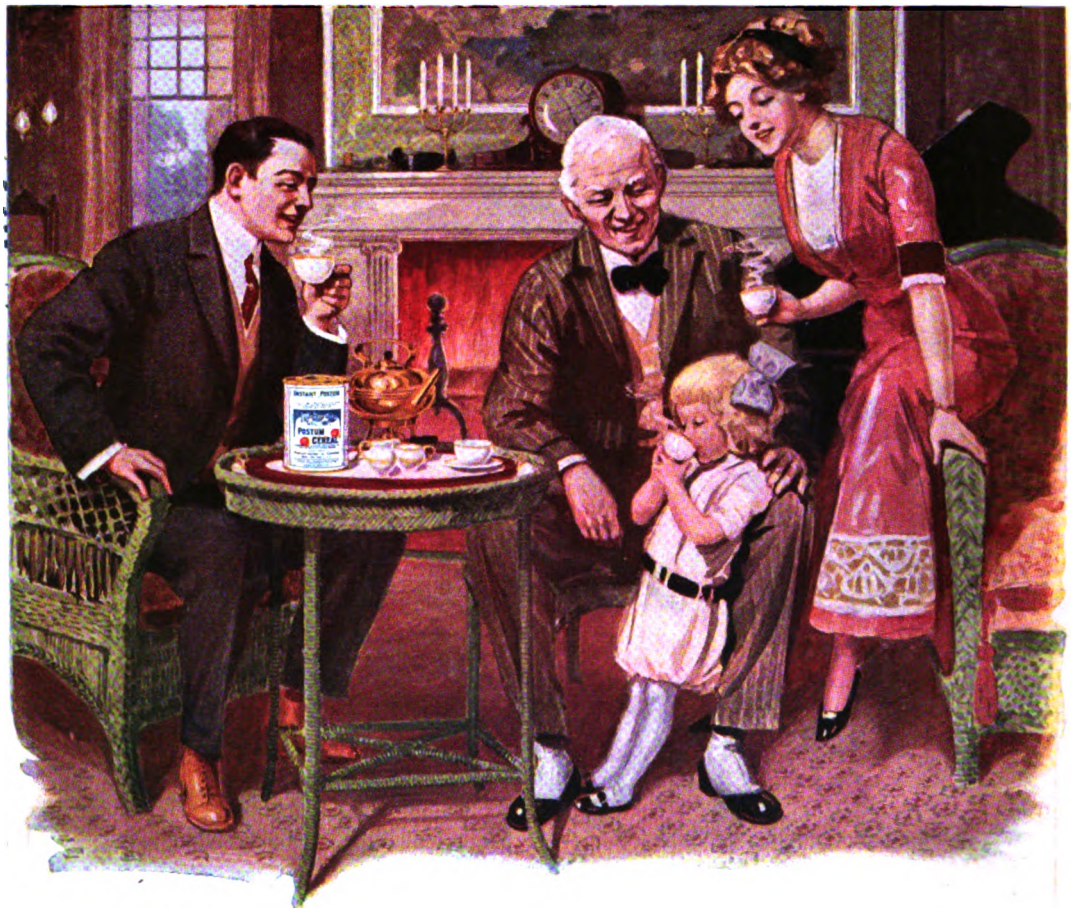

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Far hills dim through the autumn haze, yellow of ripened sheaves;
Voices that send the blood race, spirits that call at dawn;
Smile of old Autumn's ruddy face, echoes of days that are gone.

—Anon.

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WHAT A PICTURE HE MADE CROUCHED THERE IN THE MISTY MORNING OVER HIS PREY!

From a drawing by Charles Livingston Bull.

Illustration for "Why the Leopard Needs His Spots," page 181.

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SPORT TRAVEL FICTION ADVENTURE

VOL. LXIII No. 2

WHY THE LEOPARD NEEDS HIS SPOTS

By CHARLES LIVINGSTON BULL

ILLUSTRATED WITH DRAWINGS BY THE AUTHOR

POET, artist, and scientist,—these three have touched the life of the wild, from widely divergent and often opposing angles. But all of them have comprehended something of the truth. The qualities of all three are necessary for a proper description of that side of nature. They unite in Mr. Bull. With the skill of an artist, the eye of a poet, and the training of a scientist he sees and records. The result is truth, as near as it is possible to reach it.

WHAT a picture he made crouched there in the misty morning over his prey! What a contrast! Beautiful white heron and wonderfully marbled cat. How alert, how keen the glances he shot in all directions! And well he might, for the dense tropical jungles of the Malay peninsula teem with killers, many of them well able to contest his right to his snowy victim.

He was a splendid specimen of the rare and beautiful clouded leopard, or *Riman-dahan* as the Malays call him, one of the so-called great cats. Not quite as large as the ordinary leopard, he was yet over six feet in length, almost three feet of which was taken up by his extraordinarily long tail.

Perhaps his most remarkable feature was the pattern of his markings, great brownish blotches along his sides, heavily outlined with clear black against a light grayish background, some of the blotches almost the full depth of his body. There were heavy black bands down his neck, along his back, and the sides of his face. The top of his head, his shoulders, legs, hips, and white under-parts were spotted and blotched with black, the whole combining to make a unique and elaborate pattern.

His beauty was further enhanced by his graceful proportions and lines. On the ground his broad chest and rather short, thick, muscular forelegs gave him

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a gait which was somewhat stiff and heavy, similar to that of his great cousin in South America, the jaguar, or, in less degree, to that of a bulldog; but he rarely stayed for any length of time on the ground, and the moment he leaped to a branch he was at home, the sinuous, graceful, serpent-like, tree-dwelling cat.

The clouded leopard has one anatomical peculiarity which proves it to be of most remote origin. The remarkably long and strong canine teeth in the upper jaw—more than twice as long as those in the lower jaw—show its close relation to such extinct cats as the great saber-toothed tiger of prehistoric Europe. These teeth, closing down outside the lower jaw, are so long that this cat must open its mouth much wider in proportion than other members of its family when eating or biting at its prey, and the tips are sometimes visible even when the mouth is closed.

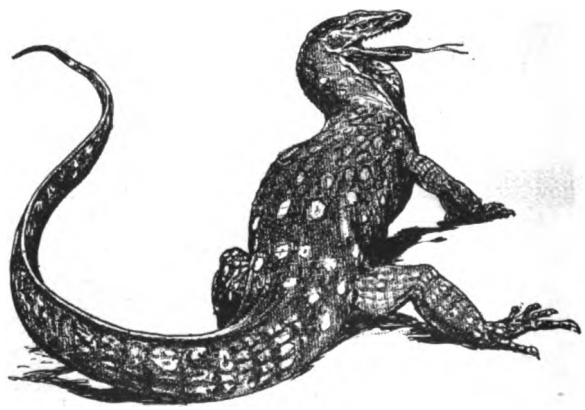
Though well past sunrise, the dense foliage of the matted branches and vines let no direct rays of light through to dispel the mists, and there was almost a twilight gloom in the depths of the jungle, yet no least movement of tiny lizard or falling leaf or flutter of butterfly escaped the keen glance of the watchful leopard as he crouched over the heron. He had just heard a sound which might well be caused by one of his foes —a sudden thud among the roots and dead branches and leaves which strewed the jungle floor, there just below him, then silence.

Motionless, he watched and waited. After a few moments, a soft rustling commenced as of something being drawn slowly over the ground, and from the gloom behind a mass of roots he saw a big lizard creep into view. It was the great water monitor, largest of lizards, full seven feet in length, over half of which was tail, with claws nearly as long and strong as those of the leopard.

The great reptile crawled slowly out of the underbrush, nosing here and there, constantly darting forth its long, forked tongue, and something about its sinuous length dragging over the ground stirred a spirit of play in the splendid cat. Having feasted early the night before on a monkey he had caught asleep, he was not very hungry, and had stalked and killed the heron more in play than from the demands of his appetite.

Now he was attracted to the crawling thing as a young housecat is to a string drawn across the floor. Closer to the branch he crouched, his ears flattening and eyes narrowing, and as the lizard passed him he leaped for its trailing tail. As he came sailing through the air the monitor sprang aside with remarkable agility for such an apparently sluggish, flabby creature. The cat was too quick and clutched the tip of the tail with the claws of one foot. With a jerk the lizard tore away and turned at bay, rearing up sideways, hissing, puffing out its throat and threatening with open mouth and ready tail. This was just what the cat desired, and he edged up, holding his head to one side, for well he knew what a slashing blow the monitor can deal with its long, powerful tail. Working gradually nearer, the cat reached out a paw as though to touch the big reptile.

Then, like a flash, the long tail lashed out like a whip. The cat, even quicker, was not here. He had seen the muscles tighten and dodged just in time. The lizard, immediately on delivering the blow, sprang to get away, but the cat



THE LIZARD TORE AWAY AND TURNED AT BAY . . . THREATENING WITH OPEN MOUTH AND READY TAIL

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was again too quick and again clutched it by the tail.

Again it turned at bay, and again the cat edged nearer, now rolling on the ground in delight, then pretending to be interested in a dead leaf. Suddenly the enraged and frightened reptile rushed at his big tormentor and, turning like a flash, struck again with its long tail, but its stratagem was of no avail, for the leopard easily evaded its rush, and once more was right there just out of reach, pawing and edging as near as he dared. Many times the lizard repeated these tactics, trying to escape or to reach his tormentor, and always the cat was too quick. Gradually they were working down hill, through the tangle of roots, dead branches and vines, toward the river bank, where the cat had caught the heron.

Now the lizard made more frequent efforts to escape, leaping away again each time as soon as he had driven back the cat. Finally he threw himself over a root and into the water, the cat's claws scoring his tail a last time as he splashed in and disappeared beneath the surface.

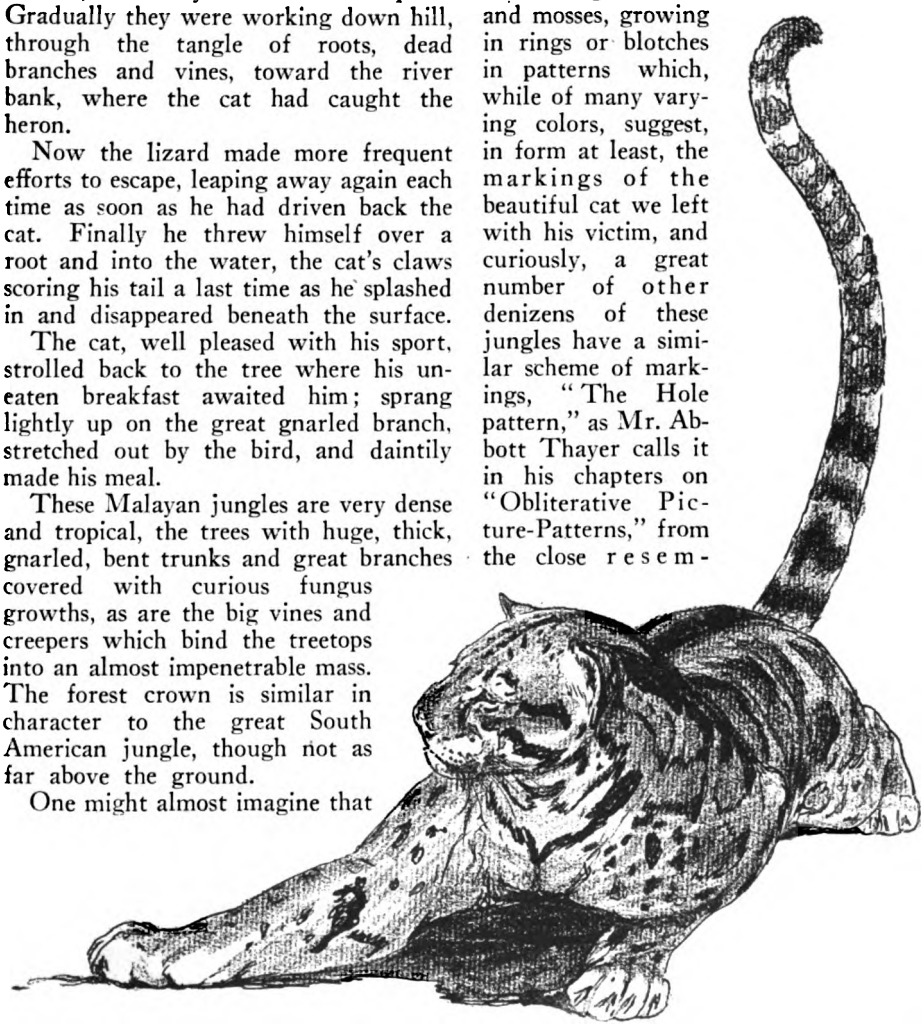
The cat, well pleased with his sport, strolled back to the tree where his uneaten breakfast awaited him; sprang lightly up on the great gnarled branch, stretched out by the bird, and daintily made his meal.

These Malayan jungles are very dense and tropical, the trees with huge, thick, gnarled, bent trunks and great branches covered with curious fungus growths, as are the big vines and creepers which bind the treetops into an almost impenetrable mass. The forest crown is similar in character to the great South American jungle, though not as far above the ground.

One might almost imagine that when the Creator had finished it He had put His hand upon it and pressed it down fifty or sixty feet, so bent and twisted are the tree trunks, though here and there a palm, or a clump of them, thrusts its round head above the forest crown.

Many of the great trunks have huge buttressed roots, and others, like the well-known banyan, have also great aerial roots which drop from the widespread branches and, penetrating the ground, form extra trunks, some of the older trees having possibly a hundred or more such trunks of all sizes.

Every stick, root, or trunk is covered with fungi, lichens and mosses, growing in rings or blotches in patterns which, while of many varying colors, suggest, in form at least, the markings of the beautiful cat we left with his victim, and curiously, a great number of other denizens of these jungles have a similar scheme of markings, "The Hole pattern," as Mr. Abbott Thayer calls it in his chapters on "Obliterative Picture-Patterns," from the close resem-



WORKING GRADUALLY NEARER, THE CAT REACHED OUT A PAW AS THOUGH TO TOUCH THE BIG REPTILE

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WITH GREAT DELIBERATION IT CLIMBED UP THROUGH THE VINES

blance these markings bear to cavities in dead branches or among leaves or sticks.

These markings have the effect of making the creatures which bear them almost invisible in the dense jungles, and when the great, beautifully blotched regal python coils up to watch for the unsuspecting monkey, or the alarmed Argus pheasant, with every feather dotted with round, black-edged "eyes" freezes into a statue of a bird, it is almost impossible for even the keen, watchful eyes of the other jungle dwellers to pick them out from their surroundings.

When the clouded leopard had made his meal and there was little left save a ring of bloody feathers, he sat back and washed, just as a house cat would, daintily cleansing, first each paw, then his legs and face, back, sides, etc. When his toilet was made to his entire satisfaction he leaped lightly over the remains of his feast and walked out the great branch to where it neared another growing toward him from another great tree, leaped across and walked down that, and so from branch to branch he came to a tree which thrust its limbs out over the river near where he had lost the monitor. Always on the alert for any least suspicious sound or movement, he here became doubly so, for the water harbors many killers and attracts all of them and most of their victims.

With eyes and ears then at their sharpest, he sprang down to a fallen trunk, one end of which was under water, and walked down it to the brink. After pausing a moment to look all about he drank, lapping the water daintily for some minutes, then turned back up the log into the branches and away, choosing another route from that by which he had come. High up among the smaller branches and vines he went; after going perhaps a quarter of a mile from the water he came to a giant twisted old trunk which sent great branches out in every direction into the dense tangle of vines, creepers, and branches of other trees. On one of these branches he picked out a fairly level spot beside a great mass of orchid roots and leaves and stretched out at ease.

The mists of morning had long since cleared and it was nearing midday. The heat was intense even in this shady lair, and after lazily watching a pair of gorgeous black and orange butterflies for a little while his head dropped to his paws and he dozed. Even with his eyes closed his nose and ears were on guard, and any slight unwonted sound or scent would have brought him instantly wide awake. All through the heat he slept, as did nearly all the rest of the jungle creatures save a few insects and birds, mostly of metallic iridescence, which seems in many cases to enable the wearer to withstand intense heat.

Late in the afternoon he was disturbed by a heavy footfall, and away below he saw a big tapir browsing through the jungle, picking up beans dropped from some of the leguminous vines or fruit or leaves from the trees or brush. Idly he watched it, for he had slight interest in such big game, being well contented to leave it to his terrible cousin, the great tiger, a cousin which the leopard, were it

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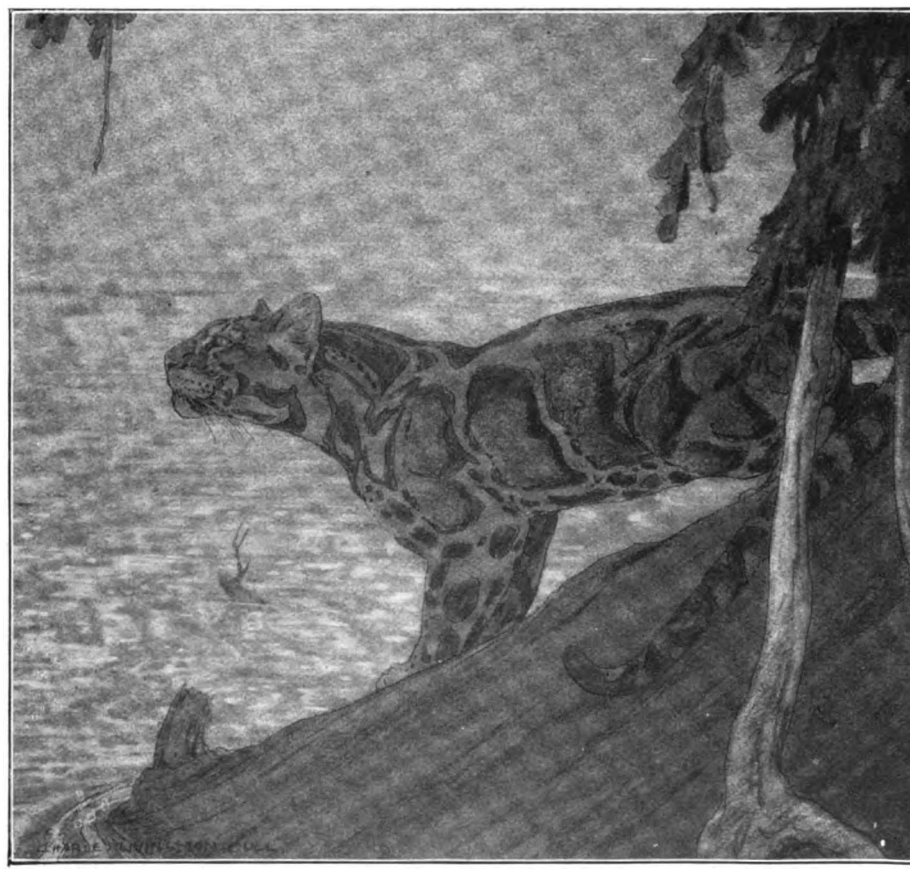
not for his wonderful skill in climbing, would have had good reason to fear.

For some time after the tapir had passed from his sight nothing further occurred to attract his attention, though as the day wore on and the heat became a little less the myriad sounds of the jungle swelled out till the full afternoon chorus was going.

Up above, among the smaller branches and twigs, a flock of parrots and paraquets began a discordant screeching altercation. All through the jungles the soft cooing and booming of pigeons vibrated till the air seemed full of its curiously ventriloquial quality. Away at the edge of the jungle a flock of peafowl sounded their loud alarm-cries, which rang echoing among the tree trunks; a little later a jungle cock crowed and was answered by another and another in different directions. These sounds had little interest for the leopard, as the birds making them were all too far away. Idly he watched the quarreling parrots and listened to the bird sounds and gradually the hot day drew to a close. Just at dusk as the day sounds were ceasing and the chorus of frogs and other nocturnal creatures was commencing, he caught a glimpse of a movement among the tangled vines overhead.

One of the large, curious, gourd-shaped fruits which hung thickly from the branches of the next tree seemed to come to life. The round lower part suddenly opened, and from one side a head appeared, while opposite a tail unfurled. The narrowed stem end divided into four limbs which seemed to be curiously joined by a webbing, yet it was not a bat. There was no semblance of



AFTER PAUSING A MOMENT TO LOOK ALL ABOUT, HE DRANK

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AWAY BELOW HE SAW A BIG TAPIR BROWSING THROUGH THE JUNGLE

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wings. From the back of the lower jaw on each side of the neck the webbing started and ran down the long forelegs to the tips of the toes of the big front feet, which were all joined like those of a duck, thence back in a wide sweep to the hind feet, the toes of which were also webbed, and from these feet to the tip of the tail.

Along the sides this webbing was similar to that of the common flying squirrel, but how much more complete! When this creature, the size of a house-cat, spread its limbs and tail, it was almost as flat as a kite and formed an almost perfect hexagon, with head, feet, and tail-tip at the corners.

It was that curious animal, the cobego, wrongly called flying lemur, as it has little or no affinity to the lemurs. It is, in fact, in some ways more nearly allied to the marsupials. One of the defenceless jungle creatures, it has two very highly specialized characteristics which serve to protect it from its many enemies. One is the webbing by means of which it can sail for as much as two hundred feet away through the jungle, alighting with ease on the trunks or branches without falling more than forty or fifty feet in that distance. The other is its remarkably protective color pattern.

It spends the day either hanging with four feet tight together from a vine or branch, head and tail tucked in, and makes with its dull, mottled olive coat a marvelous imitation of a big pear-shaped fruit, or flattened against a trunk or big branch. In the latter position the wonderful arrangement of the peculiar markings are most interesting. Irregular yellowish white spots are splashed over its sides, exactly like little flecks of sunlight, and across the shoulders and down the back extends a network pattern like the shadows of a lot of twigs over the uneven bark of a tree. Here is truly one of the most remarkable examples of so-called protective coloration in existence.

As the leopard watched it the cobego slowly twisted its head from side to side, looking about for any sign of possible danger. After some moments it slowly drew itself up and assumed an upright position on the vines, stretching and yawning, seeming to be still partly asleep. With great deliberation it climbed up through the vines to a small clump of leaves, nibbled at them for a few moments, then apparently not finding them to its taste, it walked over to a branch, crouched there for a few moments, gave a slight spring, and sailed like a little monoplane down to another branch.

This branch was much nearer the now much-interested leopard, and he flattened himself close in the hope that the queer little aeronaut might come within reach of his spring. The cobego sat up on his branch and scratched his close, soft fur with his long, strong claws, and licked and combed himself in a most monkey-like manner, quite unconcerned, as though his little brain held no thought of danger.

A Dinner Lost

Suddenly in the midst of his toilet his big, staring, nocturnal eyes seemed to note the mass of orchid leaves close beside which the big cat was crouching. Instantly he crouched and sailed down toward it, almost as though he would alight right on the crouching leopard. Trembling and tense with eagerness, the cat waited. Down came the cobego, and just before he came within reach he curved up and alighted on some small vines just above the orchid.

Like a flash the cat sprang for him, but something else was even quicker.

All day long a big regal python had been lying coiled on the branch just the other side of the mass of leaves and roots, and not ten feet from the leopard. It had seen the approach of the latter and had waited ready, if he should come within reach of its lightning-like stroke.

Remarkably similar in color, pattern, and markings to the leopard, it was equally invisible as it lay coiled on the big mottled branch, and though if it had made the slightest move he would have known it, the leopard never suspected its presence.

The hours had passed now, and as the dusk of sunset settled over the jungle the great reptile saw the cobego sail down to the orchid. Its stroke was quicker than the eye could follow, and by the time the cat struck the vines the cobego

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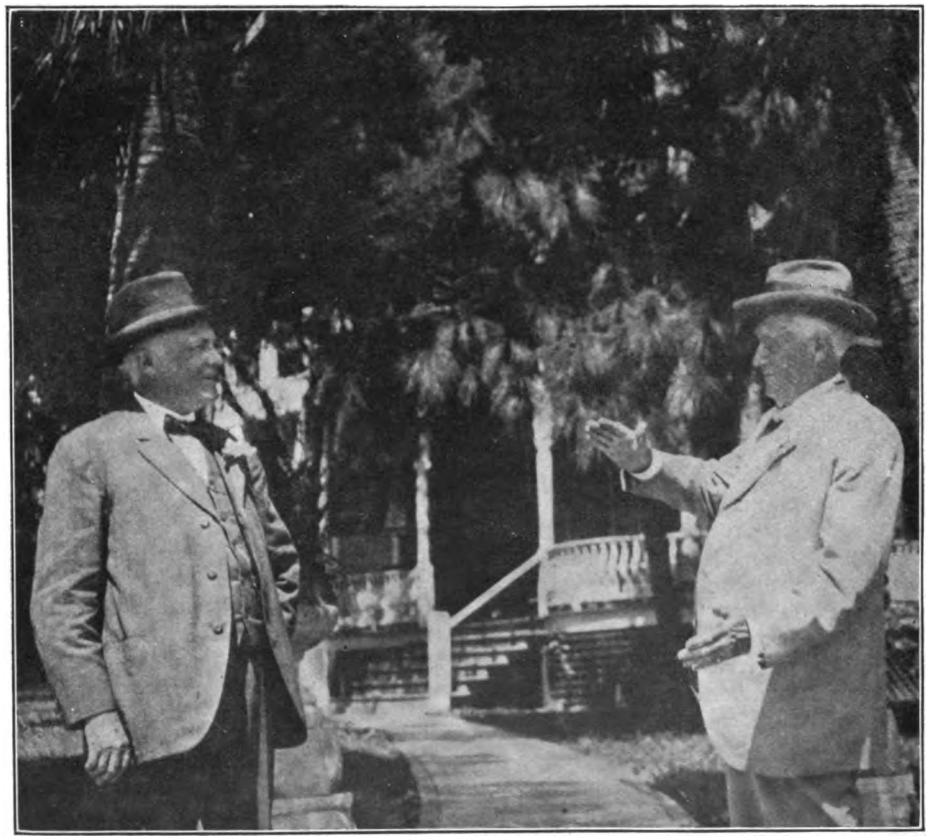
was blotted out of life, a crushed, broken rag caught in the terrible coils of the snake.

The leopard caught the vines and, instantly seeing what had happened, hurled himself backward, clutching for the branch he had just left. Scrambling upon it, he raced away through the jungle for his life, leaping from branch to branch until he had put a good distance between himself and the great serpent, for well he knew it could crush him even as it had just crushed the cobego.

The great serpent had beaten the cat at his own game of hide-and-seek. His coloring, backed by his greater power of moveless waiting, had given him the leopard's prey and almost the leopard himself. Leopard and snake and cobego were pursuing each their devious and natural ways, but together they furnished a striking example of the skill and limitations of Nature, the master-painter, in fitting individuals and backgrounds.

The theory of protective coloration naturalists call it, and it is most interesting to follow out its wonderful developments. No doubt it is partially at least an explanation of the fact that some of the unarmed creatures have not been exterminated, but the most elaborate imitative picture-patterns are of little use, save when the wearer is either asleep or, in the case of the killers, when lying in wait for prey, for the least movement exposes the form to many watchful eyes, and, of course, all creatures must move at times.



PUZZLE PICTURE

What is the man at the right talking about? If so, how long do you think it really was? And why didn't he land it?

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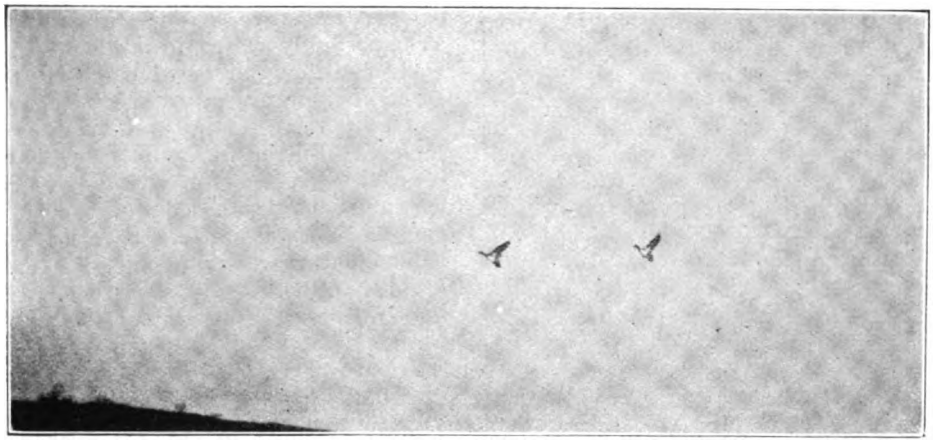

THEY SEEMED TO SPRING FULLY TEN YARDS INTO THE AIR BEFORE THEY EVER BEGAN TO FLY

CALLING CALIFORNIA DUCKS

By R. P. HOLLAND

PHOTOGRAPHS BY THE AUTHOR

A Tale of Two Men and a Duck Call in a Blind with a Gun Club Near at Hand

THE first thing I heard on arriving in the State where the sun shines on both sides of the fence for three hundred and sixty-six days in each year was that unless a fellow was a member of a gun club, or was lucky enough to be invited by a member of some club to join him on a hunt, it was impossible to get anything like good duck shooting. And this in a country where there are more ducks, or at least as many ducks, as any other place in the world. The more I inquired the more hopeless it began to appear. All the ponds and lakes were either owned outright by the clubs or controlled by leases. These clubs varied in size from a two-acre pond up to clubs containing thousands of acres.

Get on any of the interurban cars in Los Angeles and as you are swept out through the country you will pass innumerable sloughs and ponds, and on nearly all of them you will see ducks of many different varieties. These ducks scarcely look up as the car rushes by, and you think to yourself how tame they are and what a wonderful country to hunt in. But as you look again you will notice that all these ponds and sloughs are fenced and on every third or fourth post is a little sign. That there is reading on this little square of canvas is plainly seen, and the conductor tells you that it is a gun club, and that if you were close enough to read the sign you would be informed of how many different things the law can do to you if you step across this fence.

Like all questions, there are two sides to this gun-club argument. To which side a man belongs is generally determined by which side of the fence he is on. All outsiders are called road-hunters by the club members, for the reason that on shoot days in the clubs when the ducks are driven from one club to another or out to the ocean, you will find all the roads running by these clubs well

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EVERYTHING WAS QUIET EXCEPT THE WHISPERING QUACK OF THE OLD DRAKE

supplied with hunters who give the ducks a parting volley as they pass out. One of these road hunters told me that he had been invited once to shoot with a club-member and that it was simply slaughter. The ducks are fed twice a week in most of the bigger clubs, and shot twice a week. This man told me that in front of each blind about twenty yards was a table on which the ducks were fed. This table was made just flush with the water, and when the grain was placed on it the birds could climb out of the water, up on the boards to eat.

Naturally, when the ducks came in, they would come straight to these tables, looking for food, and instead would be bowled over by Mr. Clubman, who was sitting comfortably waiting for just that very thing. My friend told me that this club prided itself on the fact that its by-laws prohibited the use of decoys as unsportsmanlike. I believe that the last legislature of California prohibits the "baiting" of wildfowl in gun clubs, and if this is the case I will warrant that these same club-members will feel that it is sportsmanlike to use decoys. Many scientists claim that birds and beasts can not reason, that whatever they do out of the ordinary is due to instinct. Whether it is reason or instinct, it is wonderful to watch these club ducks loaf around, within ten feet of the club fence, as though there was no such thing as a shotgun. But again should he wish to cross that fence to an adjoining club, you will find that he goes a good hundred yards up before he chances it.

Should you talk very long to a club-member, he will tell you that the road hunter is usually a rascal of some sort or other who hangs around the fence in the hope of getting a cripple, in the meantime shooting at everything that passes over, no matter how high, thereby ruining the shooting of the club-members. Most of these clubs shoot on the same days of the week, namely, Tuesdays and Saturdays. The other five days the ducks are left at peace. For this reason alone I claim the clubs are a good thing, for without them in a country as thickly settled as this part of California a duck would know no rest. Also, much of this club land would be drained and made to produce crops, were it not that it is set aside for the ducks and the sport of shooting them.

One of the largest clubs in that section is supposed to contain 3,700 acres of land and water. Of this amount perhaps 1,000 acres are water. A great deal of the land is very valuable as celery land, and were it not for the club-members, it would undoubtedly all be drained for this purpose. I was told that the initiation fee in this club was $20,000.00, and that the annual dues were $1,000.00 per member. As there are forty members this gives them $40,000.00 a year for running expenses; and my informant told me there had never been a year that they did not have to make a re-assessment. In the year 1912 the expenses ran to $70,000.00; so, you see, this gun-club business is not exactly a poor man's game. This one property controls five miles of ocean frontage.

My friend the duck-hunter had told me in his last letter that if all went well he would be out to take a good old hunt with me in California, and I was trying my best to get things fixed up before I should receive a letter saying what train he would be on. I knew that as an old-

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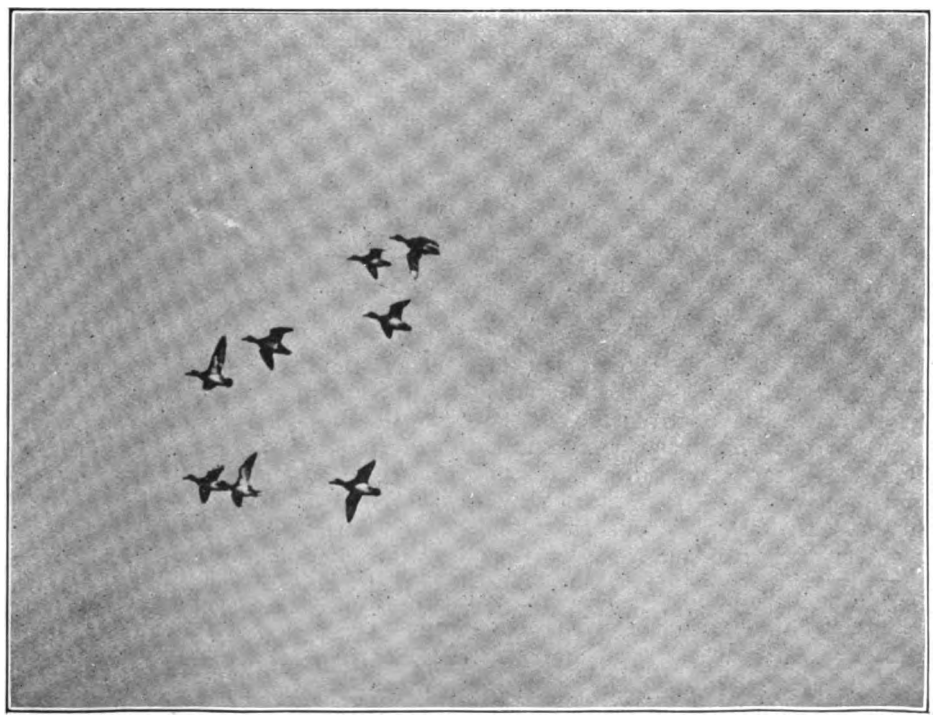
timer he would not enjoy standing out in a road taking long shots at high ducks as they passed over. Neither did I have the necessary to buy a club of my own. The only thing to do was to find some salt-water bay and try to decoy some of the club ducks when they passed over, going to the ocean. The clubs are not allowed to fence off any navigable water, therefore bays and rivers are all that are left for the decoy hunter.

Newport Bay seemed to me to be the best place I could find, although the natives told me that no one had ever had any success there in shooting over decoys. When the ducks pass out over the bay to go to the ocean, they are too high and will not notice the stools. Still, what more could I do? To all appearances this place was ideal. The salt marsh extended for six or seven miles back into the country, and beyond this was a gun club in which there were thousands of ducks. On days when they shot in the club all of these ducks passed out over the bay to rest on the ocean until the big noise was over. I had all the confidence in the world in my old friend the duck-hunter and his ability to call some few of those ducks to our decoys. At least, I would bring him up here and let him try it once, and if we couldn't kill any we would join the ranks of the road-hunters, or hire one of the many motor-boats rented to shooters who satisfy the lust for blood by slipping up on a bunch of unsuspecting ruddies or coots and potting them as they try to leave the water.

The duck-hunter arrived in good time, and I laid the plans before him and told him that in my heart I was afraid of results. His reply that unless they were different from any other ducks he had ever seen we would get some of them did not ease my mind to any great extent. There was no use in our going until Tuesday, when I was told they would shoot in the club. So on Monday night we fixed everything in readiness, and long before the first sign of day had lightened the east we were chugging up the bay in a little motor-boat. It was just beginning to get light when



RIGHT OVER THE DECOYS THEY SWEPT

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our engineer told us that he could go no farther with the motor, and that we would have to get into the skiff which we had towed with us.

While we were still rowing through the shallow water toward the club, we heard the first shot fired, and literally thousands of ducks raised into the air and began circling, while others cut straight out over our heads for the ocean. "Fair enough," said the duck-hunter. "We have their line of flight now, so let's get over to this north bank as quickly as possible and get our decoys out."

Over we went, and while he set the decoys to suit himself, which in past years I had found always suited the ducks, I busied myself with the blind. But, say, you fellows who have cut willows by the wagon-load and pulled slough grass by the armful in order to hide yourself from the ducks should have seen the material I had to work with. The day before I had spoken to Joe, our boatman, about a blind, and he had told me to leave it all to him and he would have the material in the boat, so that I would not have to bother with it in the morning. His word was as good as his bond, for there in the bottom of the boat lay six big palm leaves, with the ends all sharpened to stick in the ground. They were dry and just the color of the dead grass behind us. Such a blind! I never saw a better one; two leaves in front, two behind, and one for each end and your blind was completed.

With blind all built and decoys set, we were ready for the ducks; that is, I was all ready—the duck-hunter was not. He was out at the edge of the water soaking his duck call, to take the rattle out of it, he said. No, indeed, not one of the boughten kind, but a homemade affair, made from a piece of hard maple, grown right on his farm back on the old Missouri River. As he raised up from the water and put the call to his mouth to try it out, I noticed a bunch of bald-crowns weave and dip as the sound of the call reached them, and my heart was glad, for I had confidence in this man and his duck call. In years gone by I had seen him perform wonders with it and the sound of it once more brought back old memories of hunts where the ducks actually acted as though they wanted to get into the blind with us, so anxious were they to find the call.

"All set," said the duck-hunter. "Let's see what that old mallard thinks about it." And with that he commenced to call, first the long mallard call, sharp and very loud, and as the duck approached he kept up the same call, lowering it as the bird drew nearer; then, all at once, he changed the music into the clucking feed-call of the mallard hen. This was too much for our green-headed friend high in the air, and with set wings he swung out over the open water in front of us, circled, and started straight back for the decoys. As he slid in over the outer edge of the decoys, the duck-call by my side ceased its noise and everything was quiet except the whispering quack of the old drake as he sailed over the decoys, looking at each one carefully to see where the caller was located. "Take him," said my friend, and before I stopped to think that he was my guest it was too late, and the first California duck had fallen to the wiles of that Missouri duck-call.

"Fair enough again," said my friend. "If they all fall to it as easy as he did, I don't think we will have much trouble getting a mess for to-morrow's dinner." Another volley was fired in the club grounds, and fifty or more bald-crowns jumped from the grass just the other side of the club fence and started for the ocean. "Here come the next victims," and he fairly crowded the words out of his mouth with the duck-call. It was the same old long mallard call as before, and it seemed to be making an impression on the widgeons, for as they passed over us fully two hundred yards high you could plainly hear them whistling in answer to the call. Still they did not lower their flight, but held straight on for the ocean.

When about three hundred yards down the bay from us a little squad of five or six was seen to leave the bunch and start back up the bay. It was then the call was again changed to the feed-call with an occasional rasping quack of the widgeon. Straight they came; their minds had been made up before they had

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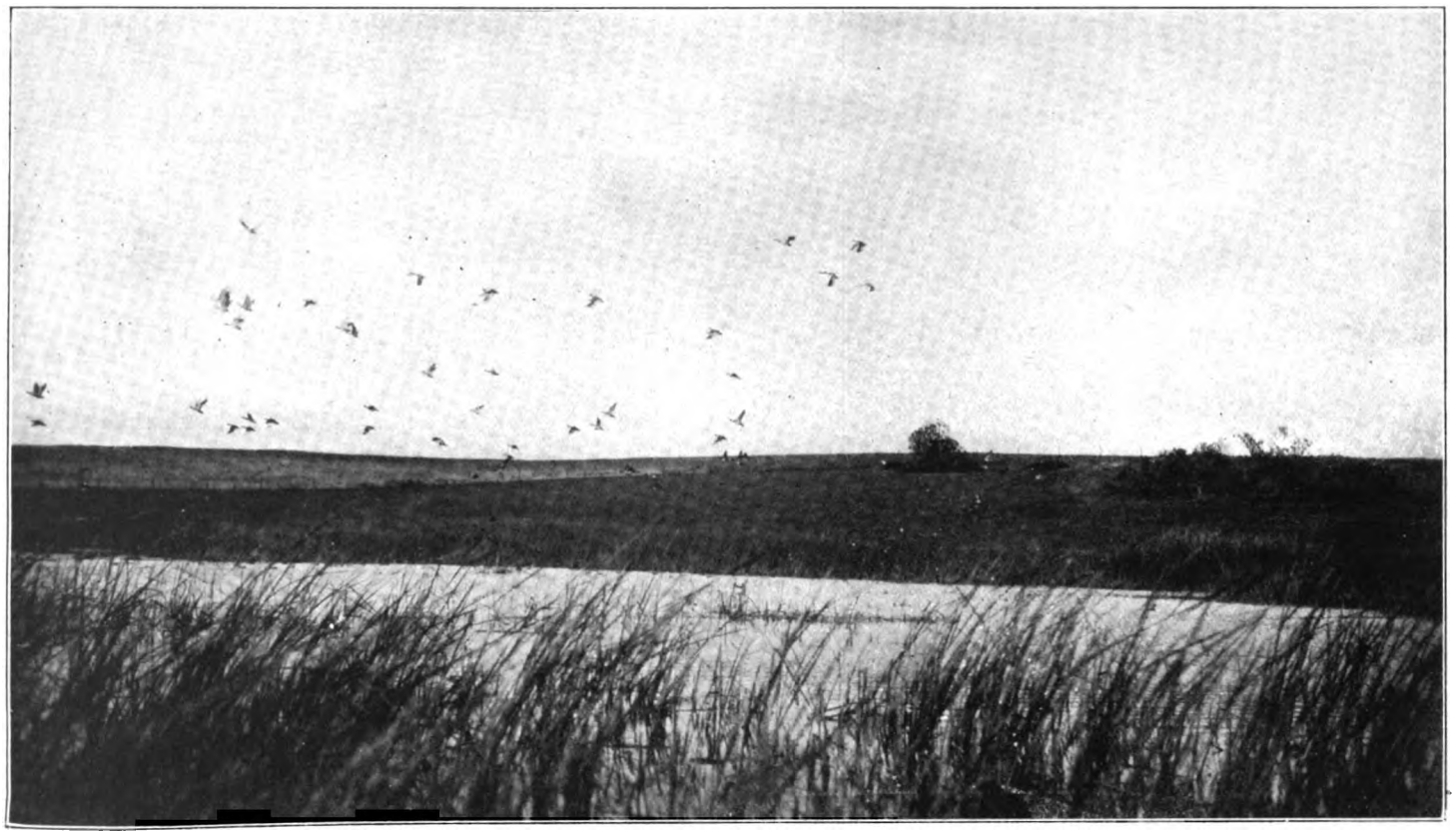

FIFTY OR MORE BALD-CROWNS JUMPED FROM THE GRASS JUST THE OTHER SIDE OF THE CLUB FENCE

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THEY HAD SAILED OUT OVER THE GRASS AND WERE PLANNING TO LIGHT

made the turn. All of them whistling, it seemed as though they were racing to be the first one there. Were they surprised when the first shot rang out? I owned the second shot and I know only that it went at least three feet under the duck I had intended it for. Can a widgeon get away fast? The duck-hunter says they can outclimb any duck on the getaway, and whatever he says about ducks is law.

We were not so lucky with the next flock or two of bald-crowns that came out of the club, and had to be content with watching them wing their way on to the ocean. "Here comes a bunch of blue-wings," and the duck-hunter commenced to talk teal talk as fast as he could. Everything seemed to be going nicely, when of a sudden he stopped calling.

"What are they?" he exclaimed. "They are not blue-wings."

"Cinnamons," I replied. "The same talk will do the work, with maybe a little variation of spoonbill occasionally."

"New ones to me," he answered, and the music was continued. The interval that had elapsed was time enough for the little rascals to think it over and they had decided that while it sounded pretty good, all was not well. With a circle or two they slid into the water about a hundred yards out from the decoys. And there they sat, perfectly motionless, with heads held high, looking straight at the decoys.

Now was an opportunity for real work with the duck call. It was evident that they wanted to come, still you could see that they were more or less frightened, perhaps by the calling having stopped so suddenly and then starting again. One false note would send them skyward, for they were all attention and on their toes ready for a jump. First he tried several little blue-wing calls, then a clear spoonbill call, followed by the contented chuckle of the feeding shoveler. Apparently these little red-breasted teal hadn't moved a muscle; none of the calls seemed to have the least effect on them.

The whole list was tried over several times with an occasional high-pitched green-wing call. I had about given up all hope of ever pulling the wool over the eyes of these wise little fellows, when I felt a jab in the side, and, looking out through the peephole in the blind, I saw that they were swimming in. For twenty-five yards they swam straight for

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us; then, with a short little quack, one of the hens jumped into the air. In a second they were all up and coming straight for us. Had it not been for the shotguns they would have passed the decoys and lit almost at our feet, so anxious were they to find the owner of that coaxing voice.

Could anyone ask for better shooting than this? The next bunch of baldcrowns that passed over gave up two of their members to the combined influence of the call and the decoys. As they left the flock and swung over the decoys we decided to let them light, with the hope that maybe the flock would wheel and come back. But not so; on to the ocean they went, leaving two of their number sitting perfectly at ease among our decoys. "Now watch them beat it," said the duck-hunter, and with that he let out a regular Comanche yell and at the same time tossed his cap high in the air. Did it scare them? You know what I said a while ago about a baldcrown climbing. Well, those two were among the foremost athletes in the baldcrown family. They seemed to spring fully ten yards into the air before they ever began to fly, and I think they were easily from twenty-five to thirty yards high when the shot reached them, and we were doing our best to get them as quickly as possible.

We next tried our luck on a little bunch of blue-bills we had seen light way out in the middle of the bay. If we could only make them hear we could probably swim them over, although it was a long way. Did you ever hear a blue-bill's call? It is a cross between the quack of a duck and the "caw" of a crow with a guttural roll mixed in. My friend could do it better than a blue-bill could himself, and he was doing his best to attract their attention. We had noticed a motor coming up the bay, and it was evident that they also had seen the blue-bills, for they had altered their course and were now headed straight for them. While I have always contended that this motor-boat shooting was unfair to the game, I must admit that with the exception of the poor little ruddies the Pacific coast ducks have the business down to a fine point. When the boat was still a good hundred and fifty yards away from them up came the blue-bills and straight for us they headed. As they neared us we could see that there were eight of them, four hens and four drakes. Right over the decoys they swept.

"Rough the drakes first," I heard whispered in my ear, and the drakes were surely roughed.

Back behind us was a sort of marsh before the hills began, which was covered by the high tides twice each day. When we had set the decoys in the morning this had been free from water, but now the tide had raised until we were all but run out of our blind, and behind us the water was knee deep. The shooting had about ceased in the club, and it looked as though we might as well pull out for home. The duck-hunter had waded out behind the blind to try and find a wing-tipped widgeon hen he had lost earlier in the day, when I looked up and saw a nice little bunch of sprigs coming out of the club. Calling to him, I ducked into the blind to await developments. Immediately he opened up on them with the long mallard call and the rasping, squeaky quack of the sprig thrown in. Did they answer it? You should have seen them sweep down toward the water. Now was the time when I must do myself proud. In the blind alone and here came eighteen or twenty big sprigs right at me.

But were they coming right at me? Believe it or not, they were paying no attention to the decoys, but had sailed out over the grass behind me and were planning to light as near as possible to where the duck-hunter crouched in the weeds. And when he raised up and went after them with that old pump he did better than I would have done, and I also got one when they passed out over me. Funny how you can hear some fellows argue that a duck-call is a detriment instead of help in decoying ducks, fellows that have hunted a great deal, too, and know the game. All I can say for them is that they are mistaken, and I hope that each and every one of them will some day have the opportunity of hunting with a man who knows how to call.

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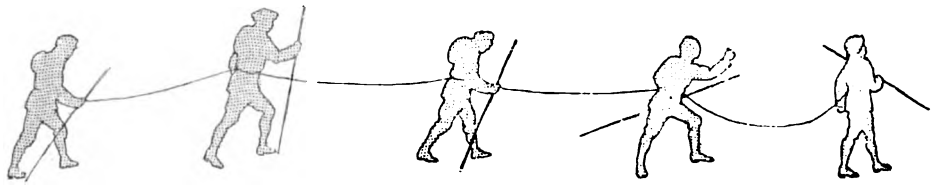

THE SOUL OF THE CLIMBER

By WALTER PRICHARD EATON

ILLUSTRATED WITH DRAWINGS BY WALTER KING STONE AND PHILLIPPS WARD

HOW many of the bold feats of maturity are prompted by the instincts of boyhood! I saw my neighbor's youngster, aged four and a half, working his way yesterday to the perilous top of a twenty-foot hemlock, actuated neither by science nor philanthropy, and I thought how like he was, after all, to the first conquerors of the Matterhorn or Mt. Robson. There is a fifty-foot hemlock in the yard which he will tackle some day—and that is Summit 2. The gain to science by the ascent of the Matterhorn was not considerable. The altitude could have been well enough determined by other methods. We may say the same of almost any other hazardous summit. Science has gained by the dashes to the Pole, but it was not science primarily which urged on the dashers. It was the same instinct which sent my small neighbor up the hemlock yesterday.

All boys are mountain-climbers. If they haven't a mountain, they will tackle a hill; if they haven't a hill, they will tackle a rock; if they haven't a rock, they will turn to an old barn; if not even the barn is available, they ascend the tenement fire-escapes. When I was a youngster climbing ability was held in great esteem, and the village hero was a boy who had ascended the spire of the meeting-house on the lightning-rod. I can still see him working his perilous way around the overhanging cornice of the belfry and then standing in triumph on the gilt ball at the apex and with his upraised hand spinning the great weather-vane around. A crowd had gathered on the Common below, the women folks gasping and crying out, "Why doesn't somebody make him come down?" the men rather awed, but we boys thrilled with admiration.

Such Matterhorns were not for most of us, but we scaled our lesser peaks by the hour. Many and ingenious were the devices by which we conquered the first steep precipices of a barn and reached the shingled incline of the summit ridge. On these perilous uplands, sneakers were a great help. With sneakers on, you could walk the ridge-pole with a foot on either side, which was a thrilling experience. Sometimes, too, we climbed the higher roofs of our houses.

My house had what the mountaineers call a "chimney," formed by the junction of the ell and the main roof. The shingles did not quite meet, and between them was a gutter of tin. By catching the porch over the pantry door, and going from there up the blinds of a second-story chamber window to the eaves and scrambling over them by means of the wooden gutter, one reached this "chimney," set his feet into it, grasped the shingles on either side, and wriggled up to the ridge-pole, whence the whole yard could be surveyed in a new perspective. One had to do it, to be sure, when the family was out—which only added another spice!

We could not have told why we made these climbs. The thing called climbing was simply there to be done, the harder and higher the better. Professor Parker may think he scaled Mt. McKinley in the interests of science, but he didn't. It was simply the roof of the biggest barn on the continent, and he couldn't stand letting it "stump" him!

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MANY AND INGENIOUS WERE THE DEVICES BY WHICH WE CONQUERED THE FIRST STEEP PRECIPICES OF A BARN

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A CAMP IN THE FLOODED FOREST

THE FOUNTAIN OF YOUTH

By CHARLES T. JACKSON

ILLUSTRATED WITH PHOTOGRAPHS

BLACKBERRIES AND SNAKES

CHAPTER IV.

Blackberry Romance

YOUNG ROJAS limped down to the beach the next day and confided to me, "Dis spohtin' life, it's too much. But if I was in N'Awlyins I'd be a spoht. I'd like to travel round and spend fo' or five dollehs a day jes' like a millionaire!"

Madame Rojas had, in her room behind the store, a tiny altar and the pictures of the Stations of the Cross about the walls. Now and then a priest called at the *Cheniere,* she explained, and they had it "fixed up" for him.

The only other evidence of the higher life was the school. It was closed. The two pupils had gone to New Orleans for Easter! The master wandered disconsolately about. He was a querulous and broken-down fiddler, not at all popular because he refused to fiddle for the balls. He told me that the heads of families were supposed to pay a dollar a month for the school, but after the first few months nobody paid, so the school always closed sooner or later.

"Anyhow," he added, "why do they need to read and write? They are the happiest and most ignorant people on the earth, I do believe. When I first landed here I used to scold 'em. But nobody cared. Just listen to those children playing on the beach. Their parents won't pay and I can't make 'em pay. And will you tell me what tongue they are talking? It isn't French—it isn't English—it isn't Spanish, nor Filipino. What *is* it?"

We left that cadaverous pedagogue bewailing. The islanders looked on him as somewhat "cracked," I believe. We got more insight into social customs. We had wondered at the many Yankee names of the people until it was explained. They—the Browns and Smiths and Bailys—were all corruptions from

This story began in October OUTING

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A TIE-CUTTER'S CAMP ON THE BAYOU

some other tongues. "Baronne," for instance, had become "Brown." We were confused also by the island habit of calling all women by the first names of their husbands. The wife of Francisco Vasquez was not only Mrs. Vasquez, but also Mrs. Francisco. And they all had nicknames, too, so when we went to buy bread, or call on some one, we had no end of confusion finding the exact person wanted. Clark *Cheniere* would drive a census-taker crazy.

The next day a sou'easter blew which mauled the shell beach until it shook. Hen and I had a task holding our tent pegs down. By sunset the whole curve of the shore was a rolling carpet of pink and blue and white shells lifted up and flung musically at our feet and washed back to come in on the next surge. The next morning the shore line was entirely changed, the shells being piled in long reefs far over the green marsh.

It was still breezy. Hen and I had a hard time getting breakfast. There was no fuel except the flimsy weed drift. It kept one of us busy holding the fire down under the irons while the other made coffee and boiled the oatmeal. Half a dozen times we had to chase that fire down the beach, bring back the remnants and start all over again. It enlarged our vocabulary immensely. The sou'easter bellied the little tent tight as a drum, and the pegs threatened to pull from the shells. Finally we dropped it, lit our pipes, and wandered up the beach around the oak point to see what our friends were doing.

"Probably making another ball," said Hen. "Balls and turtle eggs—they're getting on my nerves. But what a morning—wow! I feel like my hair was growing in again. Whoof!"

But the festive populace was resting. The schoolmaster was sitting on a crab box gazing northward, whence the school should reappear. Juan Rojas smoked on his sto' gallery and watched his sons paint a boat. The luggars rode at their moorings and the fishers slept under the china trees. A pirogue man came in from the marshes behind the *Cheniere* with a few teal and *dos gris* and turtles, and the children gathered about. But all day the lazy island dozed in the sun and breeze. Hen decided to try his tarpon gear at gar fishing, and this becoming noised about, the entire population gathered at the pier. The Cajuns smiled—catch a gar on that foolish little line and rod? *Le nom de Dieu*—what would these Yankees try next?

"I'll show 'em," growled Hen grimly, and he cast prettily off the pier head and threshed the surf. He had a rise or two and then, while I was in the sto', I heard a series of wild yells. I discovered Hen

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fighting his way along the pier among the natives. He had hooked something all right. Presently a big gar charged out of water, then straight seaward. The line swung out; the natives gazed. No line would hold an alligator gar! Hen watched his reel anxiously. Then finally he turned the big fish, played him back, stopped a rush or two, and the islanders gasped. The gar was tiring—and he hadn't broken the "jigger rod"!

Round about the pier head the big fellow threshed, with Hen holding in and trying to keep him seaward. But finally, as he was grinning triumphantly at the astonished natives, the gar made a last exhausted rush under the pier, whipped about a piling and—well, Hen groaned!

But I heard another yell. Out from the shore charged a swarthy Manilaman. He carried a club and, dashing into the surf, he began mauling Hen's gar over the head. Into the water swarmed every boy on the island, and when Hen discomfitedly reeled in the remainder of his line the islanders were carrying a six-foot gar in procession to the beach. It was a woeful finish to a gallant fight. Hen was wrathful. "Confound the muckers! I'd rather the fish got away than have 'em club it to death. They're no sportsmen!"

They were not. Just why a man should want to catch a gar was beyond them. "Dat fish no good, M'sieu! He mek no gumbo, no cou'bouillion — no nuttin'!"

"I'm going to fry him!" growled Hen.

They scratched their heads. No telling what a Yankee would do!

Paul and Otto came with us and we lugged that hornyhided fish to camp. The boys spent half a day trying to scale him and whack off the tough yellow meat. He was as palatable as a paper box.

The next morning a shy youngster clothed in a shirt made of a flour sack came to camp. He invited us to go blackberrying. Blackberries! Where? I gazed about the watery wilderness. The lad dived off in the bush without giving us details. Hen concluded he would stay in camp and repair his tackle and digestion after that gar supper of last night. But I went to the village with visions of wandering down some bosky dell with a tin pail and a—a girl. You know, if you're of the North or East. Sort of a cow-pasture romance with blackberry flavor.

But when I reached Clark's a good-sized gasoline stern-wheeler rocked at the pier, and all the adolescent population of the island was waiting for me. There were buckets all right, and girls, too—and children and babies and rollicking young men, and we chugged away across the blue water with chatter and screams, Malays, Filipinos, Cajuns, and whatnot. In a minute a charcoal fire was going for coffee on the aft deck roof, and they got out loaves of bread. Jo Rojas beckoned me into the tiny pilot house. He placed the wheel in my hands and pointed to a dim blur on the horizon. "Hol' her der'," he announced and disappeared.

I steered vaguely on, the slap-slap of the paddle-wheel and the laughter of the excursionists coming to my ears. A good-sized sea was kicking up off the roadstead and presently the spray was flying over the fore decks and into the pilot-house windows. She rolled a good bit on the course, so I held more southerly, still keeping my eyes on "der'," as directed. But "der'" seemed a long way off. We pounded on half an hour, and I wondered why I wasn't relieved or given further sailing directions. I could see no one. Apparently they were all below in the freight hold, for the chatter was more subdued.

The seas pounded up, and presently I brought about so as to fetch the place which I now made out as an oak-covered point with the marsh behind it. I cleared my eyes of the suds and stared down. At times the sandy bottom heaved up uncomfortably near and I saw a shark or two but no blackberries.

As I fetched up under the lee the shoals spread wider. I grew alarmed and began to pound on the rear wall, for the signal cord did not get response. And the mauling engine probably defeated my efforts. Then, when a bar seemed to shut off further progress, I brought the tub about and out to sea, dropped the wheel and ran aft along the running-board. The hold was battened tight,

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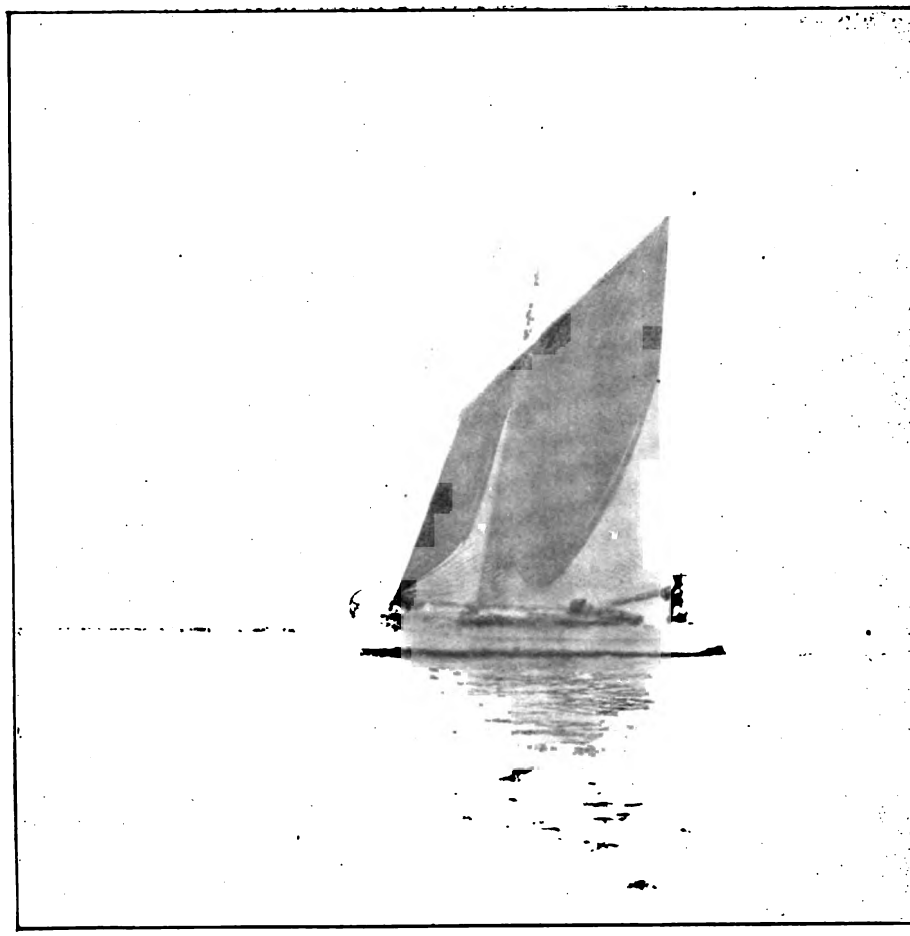

A RED SAILED SHRIMP LUGGAR OF BARATARIA, NOW FAST BEING DISPLACED BY THE MOTOR POWERED BOATS

but I kicked and scratched at the side hatch.

"Hey, you! What's the matter? Where are we going?"

Then I yanked the door open. I stared down. Honest, every youth in the lot was hugging a girl—everyone in the lot! And every baby had its face smeared with flies and molasses from ear to ear.

"Hey, you!" I roared. "Where the devil do you want this boat to go?"

And while that syrup-smeared court of Venus stared back at me, the boat hit bottom with an awful wallop. It all but put me off. A barrel of water soused over and onto those Cupids and Adonises and Venuses. Jo Rojas floundered over them and to the deck. I was back at the wheel by that time. Jo grabbed a pole and began to swear at the enamored ones who poked their heads out.

"San Sebastino! Push 'er head round! Git 'er round, you-all!"

They heaved and pried while the waves bumped us harder on. But finally we were bumped clear over the bar into better water and Jo threw an anchor. He wiped his brow.

"By Gar, dat some smash! Git yo' buckets, you-all, and git asho'."

It was some smash. The babies were yowling and rubbing molasses onto their bumped heads, and the damsels were scolding. But we got ashore with expedition, the skiff taking a load and the rest jumping in and wading. Then, with gurgles and shrieks of joy, they fell

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on the blackberries which grew in a half curve under the scrub of oaks, latanier palms, and alligator pears. They were big and black and luscious. Once in a while some busy picker would yell and we would assemble to kill a black moccasin. Once a small boy disappeared from sight in the thicket and after much trouble was pulled out of a deep hole.

"Yo' be careful of dem hide-ups," warned Jo. "Dem ol' pirates done dig this beach all to pieces."

the freight hold was not a delectable place. The lovers did not seem to mind. I suppose, however, that if one is going to be loved one may as well sit in blackberry jam as out of it. A fellow could hold his girl with one hand and scratch red bugs with the other.

I brought that sticky cargo of Eros home safe enough. It was dark when I came to camp with a pail of mushy berries. Hen and his dyspepsia were sitting by the fire fighting mosquitoes.

THE LAKE SALVADOR LIGHT AND THE KEEPER'S HOME ON A POINT OF MARSH

I looked into the hole. It was an excavation. There were four of them along the overgrown beach. I concluded that they had been dug in search of Lafitte's fabled treasure, as had the holes in the Salvador beaches on the upper lakes but Jo' insisted that the pirates had dug them.

We had gallons and gallons of berries in no time. Also many re' bugs. Everyone was rubbing and sc. when we got back to the boat. I to me rather embarrassed when over the bar. "Will you-all stee dis boat home? We-all a-goin' to jolly dem girls some. We-all clean fo'got you comin' oveh. We bring yo' some coffee dis time."

I agreed. By this time the *Cheniere* cupids had added a layer of blackberry jam to their syrupped countenances and

"By Golly," he commented, "if I'd been there I'd have wrecked the whole smear! They wouldn't have spooned on *me!*"

There is a man with no poetry in his soul. Sto' balls, girls, turtle eggs, love, blackberry jam—nothing touched him. It will be a long back-track to the Fountain of Youth for him, I'm thinking. But for me—why, I felt appreciably more hair than I had had in the morn- Hen with his sardonic levity, con- hat I felt was molasses smear. However, I let it go. There is little use in arguing on the higher things with a man who will try to eat an alligator gar.

We inquired further into local history. In the last yellow fever epidemic —1904—fifty-five of the ninety-two inhabitants of the *Cheniere* had it. It

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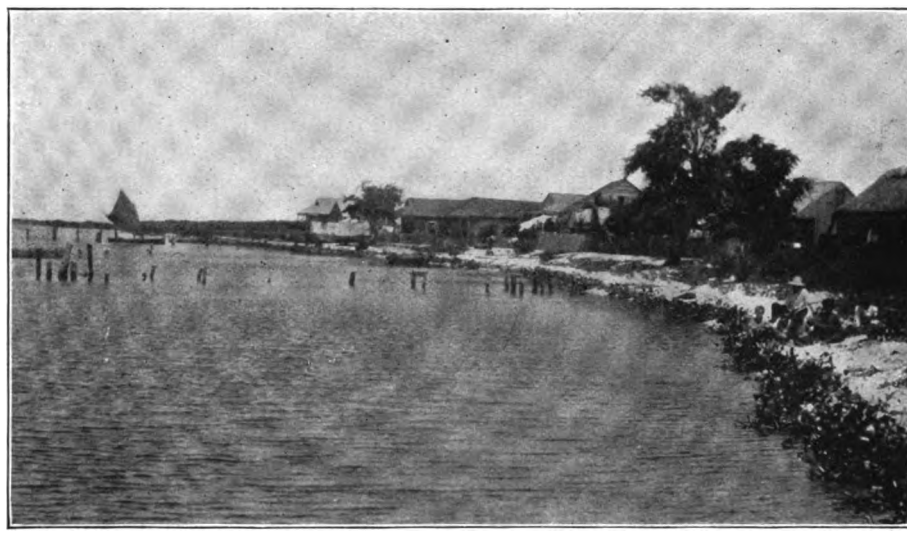
scourged every house in the village, but only three had died. A beach character called "Red" had a peculiar story to relate of one instance he knew. "Der' was wan bad modder. She had feveh and she let her baby suck dat poison all out from her breast. Dat baby, he die, but dat modder, she get well. I sho' wouldn't be any modder like dat."

The *Hazel* boat brought two more men down for Gyp Baily's crew that day. We talked with them and found they were typical "'bos" who had beat their way to New Orleans by rail and had taken a levee captain's word that wondrous riches were to be made in the shrimp fishing. But they stood on the wharf that first day and eyed the seine company struggling with its net out beyond the gentle surf with great disfavor. The men were warily dodging the great stingrays that had become entangled in the seine, and the hungry sharks following to seize the dead and escaping fish made the water boil around the luggar. One of the 'bos had gingerly tried to assist hauling, but hastily clambered out, despite the seine captain's swearing.

"I don't cotton to this game a whole lot," he remarked. "I never did love fish, anyhow."

Gyp told me later he would ship the 'bos back to the city. They would only spread discontent among his crew if he kept them, granting that they might be induced to work. I met them lonesomely sitting on the beach at dark, slapping mosquitoes. They asked what we were doing down in Barataria, and when we said we were on a pleasure trip they roared with laughter.

"Pal, you got some new ideas of pleasure! I never see such a layout since I been on the road. These greasers ain't human!"



THE TRAPPERS' HUTS ON THE SHELL BEACH OF LITTLE LAKE

We were at the schoolmaster's the next morning, idling a beautiful Sunday over coffee and conversation, discussing the mystery of our lost canoe, of which no word had come on the *Hazel,* when one of the oddest men I ever saw came in. He was a wiry, wrinkled, coffee-colored little bundle of mingled animation and shyness, gesticulating and interrupting as the pedagogue translated his nervous speech to us. He was Allesjano, sailing master of a sloop that had come in from Cutler's Island. Cutler's Island was the home of Baron Von Gaal, the owner of the sloop and a person of note. The schoolmaster enlarged on the Baron and it caught our fancy.

The Baron was an expatriated Austrian gentleman, who had fought in the Civil War, made a fortune in New Orleans in the lottery, lost it and retired

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to a bit of Eden in lower Barataria. Allesjandro was his major-domo, and a more loyal never served. He couldn't say enough about the Baron, the garden, the oysters, the fishing at Cutler's, and wound up with a profound bow and an invitation to visit his master's domain.

Hen looked up with the first show of interest since he ate the alligator gar. "Some class! Us for Cutler's!"

"But we started for Florida," I argued—"and the Fountain——"

"Right-O. But we can't walk. I've given up the canoe—the railroad people are hopeless. There's a Manilaman up the beach who offered to sell a pirogue. Let's buy it and start somewhere and wind up at the Baron's."

That seemed uncertain enough to be enticing. We had heard a deal about the country across the chain of lakes to the west. Clear days a dim line of forest showed above the water. Allesjandro offered to take us over in the sloop if we bought the pirogue. We all went to see it. Allesjandro knew the former owner—one Juliano, also a Manilaman. He vouched that it was a bargain at ten dollars.

We looked it over. It was sadly unlike the beautiful seagoing canoe we had ordered from Old Town, Maine. Thirteen feet long, twenty-eight inches wide, hewed from a single cypress log, yet it was a deal more seaworthy than the usual trapper's dugouts. It had a decked space fore and aft and a bit of coaming to ward off the splash. We looked at it, estimated our pile of dunnage, and then I tried it out and was swamped trying to get about the point to camp. Hen ran along the point yelling advice, which was good, seeing that he had never been in a pirogue in his life. But Allesjandro was full of praise. I pounded up through the surf to camp.

Juliano, Allesjandro, and Hen formed a reception committee and shook my dripping hand.

"Good old scout!" congratulated Hen—"you only capsized *once,* didn't you?"

That was unnecessary. However, Juliano and Allesjandro made it up. I was "wan great beeg pirogue man." I could go anywhere in safety—around the world, or to Mawgan City, or anywhere. Old Juliano was touched at the thought of parting with his lake pirogue. It was named *Bantayan,* after his native town in Mindanao, and positively he must weep when he thought of selling it. Yet he would—for ten dollars. But only to distinguished strangers like ourselves.

"Well, I don't think we can lose—for ten dollars," said Hen. "Only we'll be taking some awful chances with all our duffle on that thirteen-foot coffin. But we can't stay marooned here all summer."

So we bought the *Bantayan*—with misgivings, I assure you. That was the beginning of many episodes. We had much to learn. There is much to relate. We never dreamed that this little green, red, and yellow painted log of cypress was to be our home for close to four months, nor that we should come to love it. I shall tell of just one instance of that. I recall that over in a Belle river camp Hen and I thought of renaming our dugout. Hen said *Bantayan* was barbarous. So we thought and thought. Once I had a girl named Ethel. Once Hen had a girl named Sadie. That was long ago, when we had more hair.

So I proposed that we christen the pirogue Ethel.

"No," said Hen, "Sadie."

I insisted on Ethel. Hen stuck out for Sadie. And we wrangled all day and all night and some the next day. We were amazed at our chivalry. I had never imagined it in a man who would turn up his nose at turtle eggs as Hen did. But, as I said, we quarreled over the christening, with a little pot of black paint there all ready to slap on, and a bottle of beer to break over her bow, first carefully removing the beer from the bottle.

Finally we hit a happy compromise. The *Bantayan* was a boat with her stern just like her bow, low, sharp, rakish. A stranger could not have told one from the other, for she would paddle either way. So I named the bow end, where I paddled, "Ethel," and Hen named the stern "Sadie." Ethel was painted on her port bow and Sadie on her starboard quarter. She was Ethel to all the folks

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on the left bank, and Sadie to all those on the right.

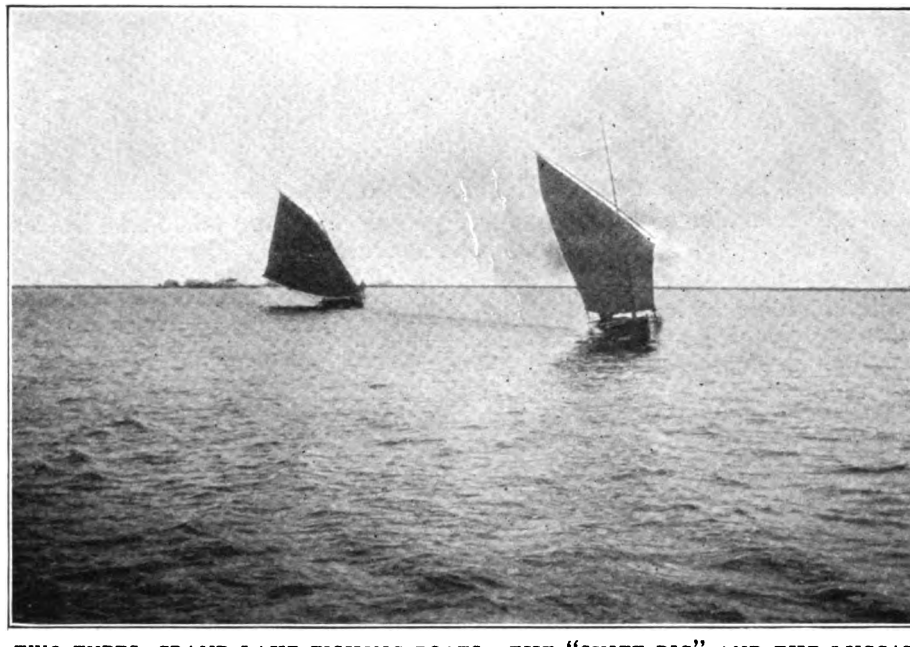
That was fine, I recall, for a time, until once we got into a walloping big whirl that took us around and around so that we couldn't tell whether it was Ethel going upstream or Sadie coming down. That rapid gave us such a scare that Hen proposed we recant and go back to our original name.

"Say," he began when we had got ashore and in camp, "I never was so much gone on that girl, anyhow. I just stuck out for Sadie because you said Ethel. Darn their pelts, let's cut 'em all and be virtuous and refined."

"Old top," I rejoined, "I'm right with you. One girl is bad enough, but *two!* How could that boat get through without being wrecked? She's a fine little scow, and *Bantayan's* her name!"

We went right down there to the bank with brotherly accord and scraped those two girls off, for'ard and aft, with our pancake flipper. So *Bantayan* she was once more, and we breathed freer, and sailed gayer, and slept sounder, and our hair grew quicker, taller, bushier—it was fine spring weather for hair.

But to go back. Allesjandro said the seas were too big to tackle in our craft. When we had loaded our stuff on the sloop and got away from the roadstead, leaving all the islanders staring amazedly at the celerity with which Yankees did things when they made up their minds, the lake was rolling with whitecaps. The little pirogue floundered and filled at the towline and Hen and I looked down at it with some misgivings.



TWO TYPES, GRAND LAKE FISHING BOATS—THE "SKIFF RIG" AND THE LUGGAR

"Brilliant idea number twenty-two," murmured Hen. "Did you propose this or did I?"

Allesjandro added the comforting after-thought that the *Cheniere* people all said we would certainly be drowned if we tried to cross to Bayou des Amoureaux with such a load in our pirogue. However, with the public eye on us now we wouldn't have backed out if we could. We arranged to send that borrowed johnboat—we had kept it now quite a month—back to Harvey. And the next day the doughty little Manilaman towed our pirogue across the lake and up under an oak-grown point of the far shore. The short, choppy seas of the great, shallow lake were mean to

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BETWEEN THE WATER HYACINTHS AND LOG RAFTS, BARATARIA IS NO PLACE FOR PLEASURE BOATING

handle in getting ashore with our luggage. It took two loads to make it, and then Allesjandro waved adieu from his sloop and left us. We sat down on our stuff piled on the beach, looked at that gay red and green and yellow log which was to transport us through the coast wilderness and mentally asked: "What next?"

The lake shores were entirely impassable. Everywhere from the narrow shell reef the bottomless salt swamp hemmed us in. On the other side the seas pounded, the sou'easter eating large holes in the shell bank and rushing through in threatening fashion.

"I'm not sure that this looks good," said Hen. "Which way do you think is the best out of this hole? Did you find out just where the bayou ran out of the swamp?"

"No. I thought you did that."

"Blessed if I did! Man, we've got to get over this habit of merely going *somewhere* without any idea of how we can get out of it."

"If this sea keeps rising," I retorted, "I know blamed well how we'll get out of it. We'll shin up one of these dinky oaks and hang on for a week—and there isn't a camp or a human being on this side the lake, they said; or a foot of safe land till we hit Bayou La Fourche."

"It's fine weather," murmured Hen —"for ducks."

CHAPTER V

The Snakes of Bayou L'Ourse

WE made a most beautiful camp in the oak grove, and when the moon drew up above the dancing waves and struck that curve of shells, and we had supped on coffee and blackberry smash spread on our hot biscuits, and had had a smoke, lying on our blankets, we felt fit for any game. We were hungry after that hard day's work, and still more tired, and slept like tramps. The gale blew all the next day and we could see nothing except a luggar hauling up from the great bay into the lakes for safety behind the points. We had planned to start at dawn along the west shore, but it was another day before we made it.

There was a deal of trouble packing the pirogue. We had two duffles, the tent roll, a general plunder sack, the kitchen kit and reflector baker, camera, guns, and tackle, besides our blanket rolls and bars, and to batten all this down below the coaming of the thirteen-foot dugout took a lot of compromising. We threw away some stuff, but kept the sail poles and canvas that we had bought

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EXPLORING A "PIRATE TREASURE" HOLE ON A SHELL ISLAND OF LITTLE LAKE

with the pirogue. Just what use we would make of them was uncertain, for when she was loaded and we paddled out of the cove, there was not two inches of freeboard, and we had to sit high on our luggage to work her along. I was bow stroke and Hen was steering. It was gingerish picking for a few miles, as the seas still flung up along the marsh shore, but by ten o'clock we turned into a broad bayou which we concluded was Des Amoureaux and was supposed to take us to La Fourche woods.

We drew on into a brilliant prairie covered with yellow and white and purple flowers, out of this into a swampy little lake, into another bayou, another lake, and on another slow-moving stream. The banks of the whole country were barely above water, and it was five o'clock when we neared the blue wall of woods. At sunset we were paddling through the big cypress with here and there a cane brake, which made it hard to follow the channel. The channel, in fact, began to shoal off into mere mud flats of lilies and scrub palmettoes, and we looked anxiously for a camping spot.

It had been a fine day's paddling and the *Bantayan* had stood up nobly. A canvas canoe would have been ripped to pieces by the needle-like spikes of the cypress through which we shoved the pirogue without danger. But the prospect of spending the night in the swamp was not pleasing. The gloom of the forest brought the nightfall quickly. But presently a light showed under the heavy festoons of the moss.

Hen gave an exultant yell: "Land-Ho! And I smell coffee!"

We drew up beside a palmetto shack. A Cajun woman came around the mud-walled chimney with a frightened glance at us. But we reassured her and asked the way. Her husband was a hunter of wild cattle and was off in the lower swamps. She said it was three miles to Bayou La Fourche, where there were plantations, but we could not get there by water. Des Amoureaux lost itself in the cypress hereabout. We made a hasty camp, hanging our bars to a broken-down wagon tongue, drank fresh milk with our cold biscuit, and rolled in. Crepelle, the cowboy, was home for breakfast, and a most excellent breakfast he asked us to—braised duck, rice and sour cream, and bread. His wife was a Portuguese, he told us. We had added another to our polyglot collection of the nations of Barataria!

As Crepelle was sure we could not get through the swamp, Hen decided to go out with him in search of some way of portaging our dugout to La Fourche. His father, a genial old alligator hunter, came to camp later. He thought we

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might follow a stream that led to Bayou L'Ourse and get to open water some miles below. The Gulf was rising, he said, and on a good tide the big woods might be traversed. On his advice we waited over a day, anxiously measuring the black water as it crept up to the rude little wharf of poles in front of the palm hut.

The Crepelles told us many stories of alligator hunting and of the raids against the wild cattle of the swamps. They had never been able to reach many of them until this spring, with its unusually high tides, had let the water-cowboys into their haunts. This was the highest land we had seen since leaving the Mississippi, and when a wagon and ox team jogged in over the trail along the ridge it was really a novelty after wandering in the wet forests and sunken lake shores of Barataria.

The elder Crepelle had a never-ceasing child's wonder at our stories of the world outside, and at our patented camp paraphernalia. He was full of *"Mon Dieus"* and *"Eh-Hos"* and *"Ho-ees,"* and comical but pathetic apologies for the rudeness of their living. But never did we meet more genuine hospitality. In fact, the finest memory of all our sojourns is the unfailing courtesy and shy but eager welcome with which the swamp Cajuns met us everywhere. It was very different from the sharp thrift with which the small town Creole trades with the stranger.

The next morning's tide had risen little. Hen set off on the ox trail with the younger man to reach the plantation country and bargain for some means of portage to Bayou La Fourche. I slept in my blankets an hour longer and then, while waiting for Crepelle's breakfast, concluded to take the pirogue and see if I could not really shove her into the forest and explore the waterway. It was a fool idea. I paddled on nicely with the lightened dugout for a mile, entranced by the morning beauty of the wet woods, the singing birds and flowers. When the cypress thinned a bit I discovered that Bayou L'Ourse led into a glade of sawgrass and wild hyacinth, and I thought I saw a ridge of higher land beyond. I congratulated myself. When Hen came back with his nigger cart I would have the *Bantayan* all loaded and ready to start for a paddle through the swamp.

So I worked on through the grass and cane. The sun was up and burning hotly down on the muddy margins of the bayou, which was now hardly more than a shallow ditch. And snakes! I began to see them lying within paddle reach, lazy and lethargic, big black moccasins, cottonmouths, and now and then a reddish copperhead. As I dug on through the mud I mauled them over the head, killing eight in as many yards. But the farther I went, the shoaler grew the water and the hotter the sun. The gnats began to dance over the evil-smelling mud and presently I felt rather sick. I glanced ahead and then back. Snakes everywhere. I stood up and counted twenty-nine.

Then I realized that it was the indescribable odor from this snake den that was sickening me; that, and the sun and the three hours' labor without breakfast. I concluded to turn about, for there was no navigable water ahead. But that gave me no end of difficulty. I couldn't drive the canoe around in the mud, and I could not step out, for the mire was bottomless and the three and five-foot moccasins were everywhere. Sick and hot, I worked at it and at the end of an hour had not back-tracked twenty yards, when I heard a *"Ho-ee!"* back in the cypress.

Old Man Crepelle was standing in his runnin' pirogue staring at me. "Man, wha' yo' goin'?"

"I don't know. Some snakes, aren't they?"

"Snakes! Worse hole in dis swamp fo' snakes. Dey got me cowed! Yo' betteh git out a-deh! Dose big ones larrup right into yo' pirogue if dey gits mad!"

I larruped another one over the head. They were too somnolent to attack one, I imagined, but Crepelle was badly frightened. He would not budge from the shade of the cypress, and I had to work back alone, with the old swamper scolding me every yard. When I got to the timber I was about done up. Crepelle let out another cry of dismay when

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he discovered I had piled three of the biggest snakes into my pirogue.

"Mon Dieu! Skin 'em! Dat's bad luck, M'sieu! Don't bring dem snakes to my camp!"

And when I approached he sat hastily down and paddled on ahead. His light shell went over flats that our heavy canoe would not take, and when I reached his camp his voice came excitedly as he told Hen: "Yo' partner, he out deh bringin' in a load o' snakes! Dey sho' got me cowed!"

compensation for the mule cart, and told the hands to see us off safely on Bayou La Fourche. We paddled on in a stiff headwind until dark, and made camp on the ancient levee. We could see nothing but the greensward, with a cow grazing here and there, and it was a pleasing surprise to climb the levee and look down on a smiling country of small farms stretching to the swamp woods three miles away on either side.

The people were all Creoles, truck-raisers and storekeepers, while along the

UNDER THE PALM THATCH THEY HEW THE PIROGUES OUT OF A CAREFULLY SELECTED CYPRESS LOG

I was too sick to skin my snakes when I got back. Anyway, Hen had a nigger cart waiting and we lifted the *Bantayan* into it, piled the camp stuff on, and set out. Mid-afternoon we came out of La Fourche woods into the narrow strip of cultivable land fronting the bayou. It was green with young sugar cane. Down the long rows a line of darkies, men and women and children, hoed the black earth, while the mounted overseer rode behind and jacked up the laggards. He was very courteous, but mystified at us appearing from the swamp, refused any

slow-moving bayou came red-sailed luggars, the Italian crews poling them against the failing breeze. It was an interesting country. We made Lockport the next morning, dined at the hotel, got directions as to how to reach Bayou Terrebonne, and set off down a weedy canal southward. But it came on to rain before the first mile and when we saw a large, dirty tent on the bank by a lumber pile we went ashore. There were two men inside, sitting by a smoky stove, and at first glance we knew they were "Yankees."

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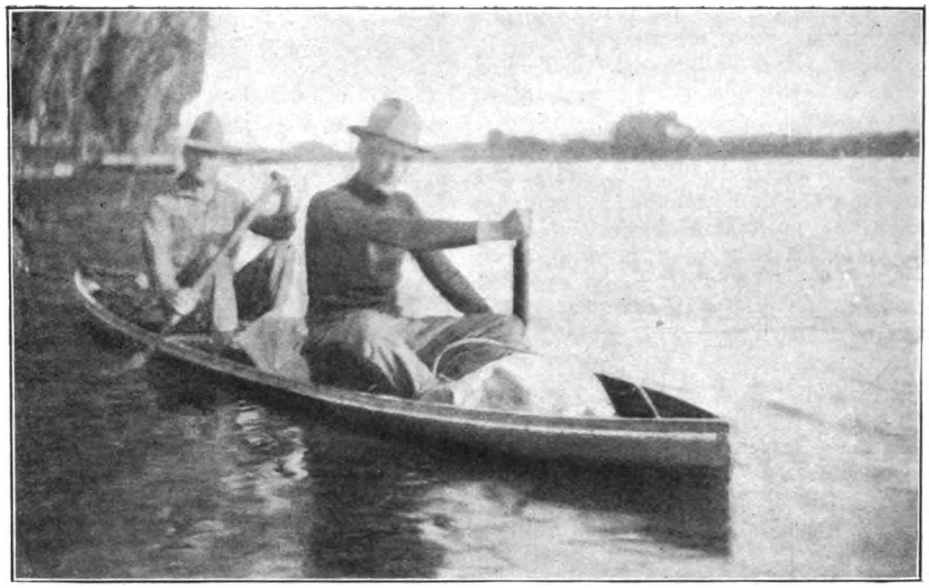

WE STARTED ON A BIT OF BAD WEATHER FOR PICTURE TAKING

They were from Kalamazoo, and they were trying to reclaim three thousand acres of wet land along Field Lake. As it blew and rained harder, we accepted their invitation to make camp with them. They helped us put up our little silk tent, and we all dined on fried trout, tea, and macaroni. Our hosts were wet but hopeful. They were waiting for the cattle which they were going to run on their holdings to kill the "piene grass" for a year or two, until they began cultivation. Several other Northerners had settled about, and the company was working to drain the small lakes to make available the land beyond "the forty-arpent line," the historic demarkation beyond which the Cajun farmers would not venture. The Cajuns shook their heads at al' this foolishness. Their fathers and their fathers' fathers had never gone beyond "the forty-arpent line"; why, therefore, should they?

However, Yankee capital was doing wonders on the black, rich swamp soil. The gentlemen took us in a launch the next day to show us how their pumping plant worked to drain the lowlands. It would remove the rainfall at the rate of two million gallons an hour from the main ditch. Into this the field laterals led the water, and we were told that the pump would drain off a four-inch rain in twenty-four hours and leave the prairie dry enough to plow the next day. Anyhow, the contrast of this black humus with adjoining areas of wild cane, infested with alligators and snakes, was refreshing.

The newcomers had great hopes of peppermint as a crop. Potatoes, corn, onions, tomatoes—all were flourishing fabulously on the Raceland prairies. But the April rainfall was something big. It fell upon Hen and me that night in our tent, the wind howled and snatched at the silk, and by midnight we were lying in a pool of water. But we refused to be routed out, although dawn came on us soaked and sleepy. We breakfasted and dried out our camp. But, glory be to the duffles and piffles! Not a drop had gone through the paraffin bags to our grub.

We paddled on the next day—a most beautiful one—through Field and Long lakes, then up Bayou Terrebonne, through another miniature farming country of the Creoles, and came to the little French town of Houma at night. Next day was Easter, and we idled in the plaza and watched the churchgoing folk. It was all clean and sweet and sunny after the swamps and snakes of

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La Fourche. Round about were sugar plantations, and motor cars rolled out the white shell roads to the great houses. We liked Houma immensely. Little boys came to our camp, all quiet, respectful little chaps, who answered "Yes, sir," and "No, sir," and volunteered to carry water. They had never seen a tent and thought we must have a "show." We had got quite used to that by now. All down Terrebonne the darky women came to the bank to ask if we were selling anything, and neither white nor colored could make out that two men would paddle that dugout around just for "pleasure."

We had a call from the sheriff of the parish the next day. He just dropped in "to see what we were about," he explained. The big plantation owners had no liking for strange white men to be about their negroes. The sheriff said that employment agents were forever trying to lure hands off the plantation to work in the lumber camps and towns, and itinerant peddlers swindled the negroes, getting good money that, of course, by all that was just and holy, the plantation stores ought to get. But when the Terrebonne planters could once understand that we desired no further business with the hands than to photograph them they were hospitable.

Our Easter dinner was a big mulligan of steak and vegetables, rice and blackberry jam, for the blackberries literally enrobed Terrebonne on both banks for miles. And the storekeeper where we made a few purchases sent us a fine banana cake, and another man sent us oysters. We couldn't help liking Houma.

Houma was a great oyster-packing point. The streets and roads were all white shelled; and one oyster house had a pile of these in its yard estimated to be worth two thousand dollars. The oysters came up the bayous from Grand Caillou, Tambalier, and all the south coast reefs, the red-shirted luggarmen lending an ever-picturesque color to the green-banked bayou. We regretted to leave Houma. Not that we knew yet where we were going. Not a word from that canoe. Hen yawned when I mentioned it. He gaped wider when I reminded him of his digestion and the Fountain of Ponce de Leon.

"Oh, yes—that old party! He made a mistake in going to Florida. He should have come to Terrebonne and had the natives feed him banana cake."

"If we're going to Florida in the *Bantayan,*" I answered, "or Yucatan, or wherever it is, we ought to turn around. It's about twenty-four thousand five hundred miles in the direction we are paddling, and my hands are a bit blistered."

"Suppose it is twenty-four thousand? We're in no hurry. Let's wander on to the Atchafalaya country and see that oak under which Evangeline sat and waited for her Gabriel."

"Girls?" I roared. "Thought you came down here to forget girls and table d'hôtes and all that sort of thing?"

"Yes," he murmured, flicking a fly off his ear. "But I want to see that oak. I want to know how Evangeline could sit under a Louisiana oak without the red bugs getting her. And if they had, there wouldn't have been any poem. No one can sigh for love with the red bugs on 'em. You can't mix girls and red bugs and then expect any poetry out of the combination—no, sir!"

So we went on lazily. Hen's automatic rifle was getting rusted and his scientific fishing kit was unpacked. He didn't seem to care. He had no interest in his stomach any more. Or his hair. He was getting almighty lazy. The way we slept nights in that silk tent was a caution. It was the hardest sort of work to be under way in the *Bantayan* before nine in the morning. And at eleven o'clock Hen invariably proposed we go ashore and eat something. But we managed to paddle on into Bayou Black, past some very fine plantations, into a region of tiny farms between the bayou and the blue wall of the swamp forest which was always in sight beyond. One morning we awoke to discover three dark-eyed children gazing at us.

"Bon jour!" they hailed us smilingly, and then disappeared to come back with hot rolls and some dry kindling, having watched our efforts to start breakfast with wet sticks.

Then they sat about us, smiling si-

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lently. We had bought a new and small coffee "dripper" some time back and now the Bodin children proceeded to show Hen how to make real "Cajun" coffee. Hen sat patiently through breakfast while our small hosts pressed the black powdered coffee in the "drip" and slowly, drop by drop, added the water.

"Now, *when* do I get my coffee?" demanded Hen, time and again.

"Oh, M'sieu, *afterwards!*" Robert assured him. And from that time on, coffee via the slow drip methods of the Cajun pot was "afterwards coffee" with us—we never could get it concocted in time for breakfast.

Three colored lumbermen also stopped in to find amusement over our breakfast efforts. The Bodin children explained that they were not in school because the "Yankee" schoolma'am had resigned. She could not find table board to suit her, demanding canned peas and baker's bread and wanting her room calcimined. The bayou people couldn't understand this, so she quit and there was no school.

The three swampers "sorteh lazed round all day," as they put it, watching us dry out our stuff from the night's rain. When we lit our pipes and strolled over to talk to them one said: "Do Ah onde'stand you-all a-paddlin' that li'l boat round fo' pleasuah?"

"Yes."

"Pleasuah?"

"Yes. Pleasure."

He looked at us and then broke into soft, inward regurgitations of laughter. "Pleasuah! Some folks is got some quee' ideas o' pleasuah! Ah'd rather done go to N'Awlyins and see a pictu' show."

None of the people here had ever seen a camper or heard of anybody traveling through the bayous on "pleasure." The Bodin children had never seen a tent; they examined and discussed ours with curiosity.

But never such kindly, lively and wideawake youngsters. Alcide and Antoinette said they would bring us some milk, but at supper time came back mournfully abashed to relate that there was no milk. The cows had refused to come out of the deep swamp back of the fields, and when the cows wouldn't come home no one could make them. We all went blackberrying the next day in the swamp edge, and the disgraced cows booed from the cypress woods, but still refused to come out.

It was on Bayou Black, in our Arcadian leisure there, that Hen had his celebrated case of the Nigger from Grand Caillou. I have told of our hypodermic syringe and stuff for snake bite. Hen was ever aggrieved at me because I refused to get snake-bitten and let him practice on me. The Nigger from Grand Caillou was hanging around camp one day and heard our never-ending discussion of the hypo cure for snake bite. Now, that nigger needed fo' bits. He needed fo' bits the worst way. So happy thought—Hen offered him fo' bits if he would get snake bit and let Hen practice. The nigger said he 'lowed he would. Fo' bits is a lot of money.

So the Nigger from Grand Caillou went off in the swamp and came back snake-bit. He showed the hole. It was a round sort of hole in the nigger, right on his forearm, and it had some blood. "Excellent!" said Hen and proceeded to pump the nigger full of dope. The nigger's eyes stuck out, but he said he didn't mind if he got the fo' bits. Well, after the operation Hen gave the nigger his fo' bits. Then we sat around waiting for something to happen to the nigger. Nothing happened. We gave the nigger his supper and Hen told him to report in the morning. He did so—before breakfast. He reported for dinner, he reported for supper. He hung around all the time we camped at Bodin's with Hen anxiously inspecting the hole and examining the nigger.

Hen was hurt because the nigger showed no symptoms of any sort. He neither would die nor would he get any better. He just hung around and had a whale of an appetite. I grew suspicious about that snake. Hen had asked him if it was a moccasin or a copperhead, and the nigger assured him that it was one of the worst snakes for niggers ever seen in these parts. The nigger stayed to supper and breakfast again and borrowed Hen's pants to go to a "ball" over near Mawgan City. Hen laid a strict injunction on him to report next day. The nigger did—before breakfast. He was a

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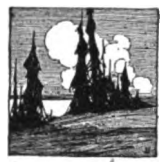
woebegone nigger now. He had become infamous overnight. The story had spread of how the Yankee doctor had used him for experimental purposes.

"Boss, I done come back hyah to ax yo' to tak dat stuff outen mah system," he said. "All dem fool niggehs at de ball dey wouldn't have nuffin to do wid me. Dey said Ah was changin' coloh lak Ah was purple now. Gin don' seem to make me feel drunk now, an' mah girl she won't have nuffin to do wid me. I hatter sit round dat ball all alone jes' lak a poisoned pup!"

Hen couldn't take the stuff outen his system. He was aggrieved that nothing outwardly happened to the nigger. As for myself, I was cynically minded as to the snake. But when we paddled away from Bayou Black the Nigger from Grand Caillou still sat on the bank, gazing sorrowfully after us. He was the poisoned pup. We had totally ruined his social position.

(To be continued)



THE DEADLY FRYING PAN

By KATHRENE GEDNEY PINKERTON

An Instrument of Good or a Weapon of Evil, According as It Is Used

NO artist ever drew a picture of a camping scene without showing, in the immediate foreground, a frying pan energetically at work. No camper ever went on a trip without a frying pan unless the excitement of the occasion caused him to forget it at the last minute. No amateur camper could cook anything except coffee without a frying pan. It is the first thing one thinks of in connection with camping. It is more closely associated with the out-of-doors than a tent.

That original American camper, the Indian, doesn't own a frying pan, unless he has been contaminated by long association with the whites. Even then it is one of those three-inch, doll affairs that would seem to indicate a desire to be up to date rather than any expectation of culinary utility.

The frying pan has driven much promising woods material back to the cities. There is many a dyspeptic who would be boasting of his woods cure today had not a deadly piece of sheet iron engendered a violent hatred of all out-of-doors. To live by the frying pan alone, as so many outers do, requires a "Bosco-eats-'em-alive" stomach and a fanatical enthusiasm.

I am not advising that anyone go into the wilderness without one. But the frying pan habit should be left at home. This is not a woods theory. Sociologists blame the American pie and the frying pan habit of untaught housekeepers for many of our social ills. With her initial housekeeping equipment of canned goods and frying pan, the factory or shop girl who marries drives her husband to dyspepsia and drink, starves the bodies of her children, and furnishes work for high cost of living commissions.

The frying pan itself is not to blame. It is what we put in it; it's the grease,

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To be sure, the out-of-door man, especially in colder weather, can stand, and even demands, more fats than the city man. But the average outer, jumping from city ease to unaccustomed activity, whose suddenly augmented appetite greets any food as a friend, cannot but injure himself when he plasters his stomach with grease three times a day.

The man whose culinary activity is limited to two weeks in the year, unless he has that natural bump of cooking, associates all food with a frying pan. Given a piece of meat, his eye wanders to the frying pan and the grease pot. Shown a potato, he calculates the time required for frying it.

I do not contend for a moment that nothing good can come from a frying pan, or that on a camping trip it should not be used. But discretion in its use should be exercised. It lends itself admirably to the preparation of a quick meal, and its blackened, battered sides can turn out many delicious dishes. These, eaten on occasions, harm no one and supply, on the other hand, the fats necessary to the system as well as a variety for the menu.

A majority of us can eat pancakes once a day in the open with perfect safety, especially if they are the so-called harmless variety of sour dough cakes rather than the sort whose featheriness depends upon the use of baking powder.

The sour dough can ranks high in the list of woods time-savers. It is easy to manipulate, will supply yeast for both cakes and bread, and requires only one start, for it improves with age. Our sour dough pail has now been going continuously for nine months and is getting better all the time.

To make the "sourings," stir two cups of flour, two tablespoons of sugar and one of salt in sufficient water to make a creamy batter. Stir in a tablespoonful of vinegar and set near a fire or in the sun to sour. One author has said "it requires a running start of thirty-six hours." Two days' souring is better. Do not be dismayed by the odor. The woods axiom is, "the sourer the better," and it will not be at its best the first few days. Its great advantage for campers lies in the fact that it will raise either bread or pancakes in any temperature above freezing.

Pancakes should be set in the evening. Beat until smooth; water and flour in proper proportions for batter. Stir this into the "sourings" in the sour dough can. This rises overnight. In the morning the amount of batter necessary for breakfast should be taken out, leaving enough yeast for the next day. Into enough batter for two we stir two tablespoons of molasses, one teaspoon of salt, and one half teaspoon of soda, the last two dissolved in hot water. Thin, small cakes are better and more easily handled than those the size of the frying pan.

A quick, hot fire is necessary for pancakes, although, when frying in a pan, care must be taken or they will burn. Once a cake has burned to the pan you may as well stop and clean the pan thoroughly or every succeeding cake will be spoiled.

Uneaten pancakes should be broken up and dropped into the sourings. It improves the cakes. Some woodsmen are almost superstitious about the mixture, and, with them, the sour dough pail rivals the garbage can as a receptacle for uneaten foods. When the yeast loses its sourness from overwork a tablespoon of vinegar will revive it. The "sourings" can be carried in a pail or in a push top tin. If you use the latter be sure to allow plenty of room for expansion. We still carry on a blanket evidences of too active "sourings."

While a continuous diet of baking-powder breads baked in a frying pan is unjustifiable, from a health standpoint, still there are times when a rich, brown bannock will add the touch artistically necessary to the meal. But it should be made only in your ambitious moments, when your cooking enthusiasm must express itself. I give you the method of the north woods. Make a rich, moist baking-powder biscuit dough, using double the amount of lard. The dough should be so thin it can be smoothed with a knife. Heat a little lard in a frying pan and pour in the dough.

A bannock should never be baked in less than twenty-five minutes. With a good cooking fire, the pan should be held three feet above the blaze until the ban-

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nock has risen to twice its original height. Then lower the pan and brown. Shake the pan occasionally to see that the bannock is not burning. When one side is done, slide the bannock onto a plate, heat more lard in the pan, gently replace the bannock upside down and brown again. The result is a golden-brown loaf.

Never under any circumstances attempt to hurry the baking of a bannock. If one does not anticipate with pleasure the holding of a frying pan over a fire for half an hour, a frying pan handle eight feet long can be balanced on a crotched stick at the proper height. To brown the bannock, drive the crotched stick lower.

Meat can usually be broiled, baked, or roasted to better advantage, with the exception of dried moose or venison. This we sometimes purchase from the Indians. It is very unappetizing in appearance, but can be cooked so that it is delicious. Cut off the worst of the blackened casing and slice into small steaks an inch thick. Dredge these with flour, salt, and pepper and lay in hot bacon grease in a frying pan. Pour in a small cup of water, cover tightly, and allow to steam until the water is gone. Then remove the cover and brown.

Although I am aware of the attitude of most campers who consider it a desecration to prepare fish in any way except baking in mud, broiled or planked, I confess to a partiality for browned, steaked fish. I learned the method from a squaw. Cut off the head, run the knife down either side of the bones in the back the entire length. Cut down to the backbone and continue along the ribs. This gives you two slabs of boneless meat and leaves the entrails in the skeleton. Lay the pieces, skin side down, on a paddle blade and run a sharp knife between the flesh and skin. You now have boneless, scaleless, skinless fish, which may be rolled in flour or cornmeal, fried in bacon grease and eaten with as little difficulty as though it were moose steak.

These are a few of the dishes which justify the use of the frying pan, if they are not cooked too frequently. When time is limited the speed with which a meal may be prepared with a frying pan is an overwhelming argument for its use. But with a little forethought and judicious employment of the baker and kettle, the necessity for hastily prepared meals may be largely eliminated, and so one of the chief factors in the forming of the frying pan habit—its monopoly of quick service—avoided.

In December OUTING Herbert Reed writes of Basketball and shows why it has become the "Major Minor Sport"

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THE TRAIL TO YESTERDAY

By CHARLES ALDEN SELTZER

Author of "The Two Gun Man," "The Coming of the Law," etc.

SYNOPSIS OF PREVIOUS CHAPTERS

MISS SHEILA LANGFORD, on her way to her father's ranch, loses her way, and night and storm come on. A stranger meets her and takes her to his shack. On learning her name, the stranger, who calls himself "Dakota," shows strong emotion. A preacher who has also lost his way comes to the shack, and Dakota forces Sheila to marry him under a threat of killing the preacher if she does not. Immediately afterwards she goes on to the ranch, where she learns from Duncan, the manager, that he suspects Dakota and Ben Doubler, an old man, of being cattle rustlers. Sheila sees Dakota shoot Blanca after a quarrel in which the latter is given first shot. Sheila is caught in quicksand while trying to ride her pony across a ford and is dragged out by Dakota. Sheila rides home on Dakota's pony, and when Duncan later returns the pony to Dakota the two men quarrel. Sheila meets Ben Doubler and her father goes to Dakota with an offer to the latter if he will get rid of Doubler. Dakota agrees to the proposal. Sheila learns of this bargain through Duncan and Duncan also warns Doubler of the plot to put him out of the way. Sheila meets Dakota on the river trail coming from Doubler's cabin and later finds the latter shot in the back. She starts for the doctor and again meets Dakota, who insists on going in her place although she accuses him of shooting Doubler.

CHAPTER XIII (Continued)

A Shot in the Dark

FOR a long time Sheila stood beside the trail, looking at the spot where he had disappeared, holding his vest. Then with an exclamation of rage she threw the vest from her, but after looking at it for an instant went over and took it up, recovering at the same time a black leather pocket memorandum which had slipped out of it. Then with set lips she mounted her pony and sent it up the trail toward Doubler's cabin.

She found the nester where she had left him, and he was still unconscious. The water pail was empty and she went down to the river and refilled it, returning to the cabin and again bathing and bandaging the wound, and placing a fresh cloth on Doubler's forehead.

For a time she sat watching the injured man, revolving the incident in her thoughts, going over and over again the gruesome details. She did not dwell long on the latter, for she could not keep her mind from reviewing Dakota's words and actions—his satanic cleverness in pretending to be on the verge of taking her into his confidence; his prediction that she would understand when this "business" was over. She understood now—she did not need to wait!

Finding the silence of the cabin irksome, she arose, placed Doubler's head in a more comfortable position, and went outside into the bright sunshine of the afternoon. Near the side of the door, leaning against the wall of the cabin, she found a rifle. She started when she saw it, not remembering to have seen it there before, but presently she found courage to take it up gingerly, turning it over and over in her hands. Some letters had been carved on the stock, and she examined them, making them out finally as "B. D."—Doubler's initials. Examining the weapon she found an empty shell in the chamber, and she almost dropped it when the thought struck her that perhaps Doubler had been shot with it. She set it down quickly, shuddering, and walked slowly to her pony, examining the injured leg and rubbing it, the pony nickering gratefully. Returning to the cabin she sat for

This story began in the June OUTING

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a time on the doorsill; several times she heard Doubler groan, and once she got up and went to him, again bathing his wound, but returning instantly to the doorsill, for she could not bear the silence of the interior.

Suddenly remembering Dakota's vest and the black leather book which had dropped from one of its pockets, she got up again and went to the bench where she had laid the garment and took out the book.

There was nothing on the cover—time had worn away any printing that might have been on it. She hesitated, but her curiosity got the better of her, and with a sharp glance at Doubler she turned her back and opened the book. Almost the first object that caught her gaze was a piece of paper with some writing on it. It seemed unimportant, but as she turned it, intending to replace it in the book, she saw her father's name, and she read, holding her breath with dread, for fresh in her mind was Duncan's charge that her father had entered into an agreement with Dakota for the death of Doubler. She read the words several times, standing beside the bench, swaying back and forth, a sudden weakness gripping her.

"One month after date I promise to pay to Dakota the sum of six thousand dollars in consideration of his rights and interest in the Star brand, provided that within thirty days from date he persuades Ben Doubler to leave Union county.

"DAVID DOWD LANGFORD."

There it was, conclusive, damning evidence of her father's guilt—and of Dakota's! How cleverly that last clause covered the evil intent of the document! Sheila read it again and again with dry eyes. Her horror and grief were too great for tears. She felt that the discovery of the paper removed the last lingering doubt, and though she had been partially prepared for proof, she was not prepared to have it thrust so quickly and convincingly before her.

How long she sat on the doorsill she did not know—or care. When she finally got up and looked about her she saw that the sun had traveled quite a distance down the sky. A sorrowful smile reached her face as she watched it. It was going away, and before it could complete another circle she would go, too—back to the East whence she had come, where there were at least some friends who could be depended upon to commit no atrocious crimes.

No plan of action formed in her mind; she could not think lucidly, with the knowledge that her father was convicted of complicity in a murder. Would she be able to face him again? To bid him good-bye? She thought not; it would be better for both if she departed without his being aware of her going. He would not care, she told herself bitterly; lately he had withheld from her those little evidences of affection to which she had grown accustomed, and it would not be hard for him—he would not miss her—perhaps would be glad of her absence, for then he could continue his murderous schemes without fear of her "meddling."

There was a fascination in the paper. She folded it carefully and concealed it in her bodice, pinning it so that it would not be lost. Then she rose and went into the cabin, placing the book on a shelf where Dakota would be sure to find it when he returned with the doctor for Doubler.

Marveling at her coolness, she went outside again and resumed her seat on the doorsill. It was not such a blow to her after all, and there arose in her mind as she sat on the doorsill a wonder how her father would act were she to confront him with the evidence of his guilt. Perhaps she would not show him the paper, but she must talk to him, must learn from him in some manner his connection with the attempted murder of Doubler. Then, after receiving from him some sign that would convince her she would take her belongings and depart for the East, to leave him to his own devices.

Looking up at the sun, she saw that it had still quite a distance to travel before it reached the mountains. Stealing into the cabin, she once more fixed the bandages on the wounded man. And then she went out, mounted her pony, and rode through the shallow crossing of the river toward the Double R.

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CHAPTER XIV

Langford Lays Off the Mask

THE sun was still an hour above the horizon when Sheila rode up to the Double R corral gates. While removing the saddle and bridle from her pony, she noted with satisfaction that the horse which her father had been accustomed to ride was inside the corral. Therefore her father was somewhere around. Hanging the saddle and bridle from a rail of the corral fence, Sheila went into the house to find that Langford was not there. Duncan's sister curtly informed her that she had seen him a few minutes before down by the stables. Sheila went into the office, which was a lean-to addition to the ranch-house, and seating herself at her father's desk, picked up a six-months'-old copy of a magazine and tried to read.

Finding that she could not concentrate her thoughts she dropped the magazine into her lap and lay back. From where she sat she had a good view of the stables, and fifteen minutes later, while she watched, she saw Langford come out of the stable door and walk toward the house. She observed that he looked at her saddle as he passed it, and so of course he surmised that she was in the house. For a moment she lost sight of him, and then he opened the office door and came in.

"Hello!" he said cordially. "You're back, I see. And tired," he added, noting her position. He walked over and laid a hand on her forehead. She shrank from his touch.

"Don't, please," she said.

"Cross, too?" he said jocularly.

"Just tired," she returned listlessly.

Langford took a chair near a window and looked out, but Sheila noted that he glanced furtively at her several times, and that he seemed greatly satisfied over something. She wondered if he had seen Dakota, if he knew anything of the attempted murder.

"Ride far?" he questioned.

"No."

"The river trail?"

Sheila nodded, and saw a sudden interest flash in his eyes.

"Which way?" he asked quickly.

"Down," she said.

She did not lie, for she had ridden down, and though she had also ridden up, there was a note of curiosity in his voice which awoke resentment in her. He had never been interested in her before; he had not seemed to care where she had spent her time. Why should he betray interest now? She saw a smooth smile on his face, and knew before he spoke that his apparent interest in her was not genuine.

"Then you haven't heard the news?" he said softly.

She took up the magazine and turned several pages to conceal an involuntary start. "What news?" she questioned, without looking at him.

"About Doubler," he said. "He's dead!"

This time her start of surprise was genuine. Had the nester died during her absence? A moment's thought convinced her that this could not be the explanation, for assuredly she would have seen anyone who had arrived at Doubler's cabin, she had scanned the surrounding country while departing from the cabin and had seen no one. Besides, Langford's news seemed to have abided with him a long time—she could not tell why she felt this, but she was certain that he had not received word recently. Of course he had seen Dakota; the latter's anxiety to relieve her of the task of riding to Lazette for the doctor was fully explained—he had wanted to be the first to tell the news, and had ridden directly to the Double R after leaving her to report the nester's death—possibly by this time he had settled with her father and was on his way out of the country.

"Dead!" she said, turning to look at Langford. "Who——" She hesitated, for she observed a glint of surprise in his eyes.

"My dear girl, did I say he had been killed?" His smile was without humor. "You have been suspicious of me ever since you heard that I had a quarrel with Doubler. Possibly you thought I would have Doubler killed. But thank God, my dear, I have not that crime to answer for. Doubler, however, has been killed —murdered."

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Sheila repressed a desire to shudder and turned from Langford so that he could not see the disgust that, she felt, was in her eyes over the discovery that in addition to being a murderer her father was that most despicable of all living things—a hypocrite!

"Who killed him?" she asked evenly.

"Dakota, my dear."

"How do you know?" This time she looked straight at him and saw him change color, though his manner was still smooth and his smile bland.

"Duncan was fortunate enough to be in the vicinity when the deed was committed," he told her, "and saw Dakota shoot him in the back. With his own rifle, too."

There was a quality in his voice that hinted at satisfaction; an emphasis on the word "fortunate" that caused Sheila to wonder why he should consider it fortunate that Duncan had seen the murder done, when it would have been better for both Langford and Dakota had there been no witness.

"However," continued Langford with a sigh of resignation that caused Sheila a shiver of repugnance and horror, "Doubler's death will not be a very great loss to the country. Duncan tells me that he had long been suspected of cattle stealing, and sooner or later would have been caught at it. And as to Dakota," he laughed harshly, with a note of concealed triumph, "Dakota is an evil in the country, too. Do you remember how he killed that Mexican half-breed that day in Lazette? Wanton murder, I call it. Such a man is a danger and a menace, and I shall not be sorry to see him hanged for killing Doubler."

"Then they will hang Dakota?"

"Of course, my dear. Why shouldn't they?"

Two things were now fixed in Sheila's mind as certainties. Dakota had not been to see her father; had not received his blood money—would never receive it; and her father had played false to him and intended to let him be hung. She thought of the signed agreement in her bodice. Langford had given it to Dakota, but she had little doubt that in case Dakota still had it in his possession and dared to produce it Langford would deny having made it—would probably term it a forgery. It was harmless, too, for who would be likely to intimate that the clause regarding Dakota inducing Doubler to leave the county meant that Langford had hired Dakota to kill the nester? Sheila sat silent, looking at Langford, wondering how it happened that he had been able to masquerade so long before her; why she had permitted herself to love a being so depraved, so lacking in principle.

But she felt a thrill of hope. Perhaps Doubler would not die? She had been considering the situation from the viewpoint of the nester's death; but if Dakota had really been in earnest and had gone for the doctor, there was a slight chance that the tragedy that seemed so imminent would be turned into something less serious. Immediately her spirits rose and she was able to smile quietly at Langford when he continued.

"Dakota will be hung, of course; decency demands it. When Duncan came to me with the news I sent him instantly to Lazette to inform the sheriff of what had happened. Undoubtedly he will take Dakota into custody at once."

"But not for murder," said Sheila evenly.

"Not?" said Langford, startled. "Why not?"

"Because," said Sheila, enjoying the sudden consternation that was revealed in her father's face, and drawling her words a little to further confound him, "because Doubler isn't dead!"

"Not dead!" Langford's jaws sagged, and he sat looking at Sheila with wide, staring, vacuous eyes. "Not dead?" he repeated. "Why Duncan told me he had examined him; that he had been shot through the lungs and had bled to death before he left him. How do you know he is not dead?" he suddenly demanded, leaning toward her.

"I went to his cabin before noon," said Sheila. "I found him lying in the doorway. He had been shot in the right side, but not through the lung, and he was still alive. I dragged him into the cabin and did what I could for him. Then I started for the doctor."

"For the doctor?" he said incredulously. "Then how does it happen that

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you are here; you couldn't possibly ride to Lazette and be here now."

"I believe I said that I 'started' for the doctor," said Sheila with a quiet smile. "I met Dakota on the trail and he went."

Langford continued to stare at her; it seemed that he could not realize the truth. Then suddenly he was out of the chair and standing over her, his face bloated poisonously, his eyes malignant.

"Damn you!" he shrieked. "This is what comes of your infernal meddling! What business had you to interfere? Why didn't you let him die? I've a notion——" His hands clenched and unclenched before her eyes, and she sat with blanched face, fearful that he was about to attack her. After a moment, however, he regained control of himself and left her and began pacing back and forth in the office, cursing profanely.

Curiously, Sheila was not surprised at this outburst—she had rather expected it since she had become aware of his real character. Nor was she surprised to discover that he had dropped pretense altogether—he was bound to do that sooner or later. Her only surprise was at her own feelings—she did not experience the slightest concern over him—it was as though she were talking to a stranger. She was interested to the point of taking a grim enjoyment out of his confusion, but beyond that she had no interest in anything. It made little difference to her what became of Langford, Dakota, Duncan—and all the others, except Doubler. She intended to return to the nester's cabin, to help the doctor to make him comfortable, for he had been the only person in the country who had shown any kindness toward her; had been the only one who had not wronged her, and she was grateful.

Langford was standing over her again.

"Where did you see Dakota?" he questioned hoarsely.

"On the river trail."

"Before you found Doubler?"

"Before and after I found him."

She discerned his motive in asking these questions, but it made no difference to her, and so she answered truthfully. She did not intend to shield Dakota; the fact that Doubler had not been killed outright did not lessen the offense in her eyes.

"Before you found Doubler?" Langford's voice came with a vicious snap. "You met him coming from Doubler's cabin, I suppose?"

"Yes," she answered wearily; "I heard the shot."

Langford made an exclamation of satisfaction. "Well, it isn't so bad after all. You'll have to be a witness against him. And very likely Doubler will die—is probably dead by this time—will certainly be dead before the doctor can reach there."

Sheila rose. Her dull anger against him was equaled only by her disgust. He expected her to bear witness against Dakota; desired her to participate in his scheme to fasten upon the latter the blame for a crime in which he himself was the moving factor.

"I shall not bear witness against him," she said, "for I am going away—back East—to-morrow. Don't imagine that I have been in entire ignorance of what has been going on; that I have been unaware of your part in it. I have known for some time that you had decided to have Doubler murdered; only recently I learned that you had hired Dakota to kill him. And this afternoon I found this." She fumbled at her bodice and produced the signed agreement, holding it out to him. While he read it she stood watching him. As she expected, he repudiated it, although his face paled a little.

"This is a forgery, my dear," he said in the old, smooth, even voice which she had grown to despise.

"No," she returned, "it is not a forgery. You forget that a moment ago you practically admitted it to be a true agreement by telling me that I should have allowed Doubler to die, and if I am called to bear witness against Dakota I shall tell everything I know."

She watched him while he lighted a match, held it to the paper, smiling as the licking flames consumed it. He was entirely composed now, and in the gathering darkness of the interior of the office—for now the sun had descended behind the mountains and the gray veil of the dusk was stealing over the plains—

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Sheila saw that there was a sneer on his lips.

"I shall do all I can to help you to discontinue the associations which are so distasteful to you. You will start immediately, I presume?"

"To-morrow," she said; "in the afternoon. You may send my things over to Lazette in the morning."

"Send them?" he said, puzzled. "I supposed you would ride over with them —in the buckboard."

"I shall ride my pony. The man can return him." She took a step toward the door, but turned and looked at him. "I don't think it is necessary for me to say 'Good-bye,' but you have not treated me badly in the past and I thank you—and wish you well."

"Where are you going?" She had walked to the door and stood with one hand on the latch. He came and stood beside her, a repressed excitement in his manner, his eyes gleaming brightly in the dusk.

"I am going over to care for Ben Doubler until the doctor comes. I should have been there now had I not wanted to be certain that you——"

"You are determined to continue to meddle, are you?" he said, his voice quivering with anger, his lips working strangely. "I'm sick of your damned interference—sick of it, I tell you! You won't leave this office. What business is it of yours if Doubler dies?"

She did not answer, but lifted the door latch. His arm suddenly interposed; his fingers closed on her arm, gripping it so tightly that she cried out with pain. Then suddenly his fingers were boring into her shoulders; she was twisted, helpless in his brutal grasp, and flung back into the chair beside the desk, where she sat, sobbing breathlessly.

She did not cry out again, but sat silent, her lips quivering, rubbing her shoulders where his iron fingers had sunk into the flesh; her soul filled with a revolting horror for his brutality. For a moment there was no movement. Then in the semi-darkness she saw him leave the door; heard the scratch of a match; watched him as he approached the shelf on which stood a kerosene lamp, lifted the chimney and applied the match to the wick. For an instant after replacing the chimney he stood in the full glare of light, his face contorted with anger, his eyes gleaming with venom.

"Now you know exactly where I stand, you—you hussy! I'm your father —your father; do you hear! And I'll not have you go back East to gab and gossip about me. You'll stay here, and you'll bear witness against Dakota, and you'll keep quiet about me!" He was trembling horribly as he came close to her.

"I won't do anything of the kind!" Sheila was on her feet again, rigid with anger, her eyes flaming defiance. "I am going to Doubler's cabin at once, and if you molest me again I shall go to the sheriff with my story!"

He seemed about to attack her again, and his hands were raised as though to grasp her throat, when there came a sound at the door, it swung quickly open, and Dakota stepped in, closing the door behind him.

Dakota's face was white—white as it had been that day at the quicksand crossing when Sheila had looked up to see him sitting on his pony, watching her. There was an entire absence of excitement in his manner though; no visible sign to tell that what he had seen on entering the cabin had disturbed him in the least. Sheila retreated to the chair beside the desk and sank into it; Langford had wheeled and was facing Dakota, a shallow, uncertain smile on his face.

There was a smile on Dakota's face, too; a mysterious, cold, prepared grin that fascinated Sheila as she watched him. It faded a little when he spoke to Langford, his voice slow and even, so that there was a distinct pause between each word.

"When you're fighting a woman, Langford, you ought to make sure that there ain't a man around!"

Mingled with Sheila's recognition of the obvious and admirable philosophy of this statement was a realization that Dakota must have been riding hard. There was much dust on his clothing; the scarf at his throat was thick with it; it streaked his face; his voice was husky, his lips dry and his breathing fast and

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labored, showing that his apparent composure was largely pretense.

Langford did not answer him, stepping back against the desk and regarding him with eyes in which there was absolute surprise and not a little fear.

"You haven't got any thoughts just at this minute, then," said Dakota with cold insinuation. He looked at Sheila, ignoring Langford.

"I expect you've been wondering, ma'am, why I'm here, when I ought to be over trying to do something for Doubler. But the doctor's there, taking care of him. The reason I've come here is that I found this in Doubler's cabin." He drew out the memorandum that Sheila had placed on the shelf in the cabin. "You took my vest," he said, "and I was looking for it. I found it all right, but something was missing. You're the only one that's been in Doubler's cabin since I left there, I expect, and it must have been you that opened this book. It ain't in just the shape it was when you pulled it off me," he said, looking fairly at her; "something's gone—a paper. That's why I rode over here—to see you about it. Have you got it ma'am?"

Sheila pointed mutely to the floor, where a bit of thin, crinkled ash was all that remained of the signed agreement.

"Burned!" said Dakota sharply.

He caught her nod and questioned coldly: "Who?"

"My — Mr. Langford," returned Sheila.

"You found it and showed it to him, and he burned it?" said Dakota slowly. "Why?"

"Don't you see? It was evidence against him."

"I reckon I see." The smile was entirely gone out of Dakota's face now, and as he turned to look at Langford there was an expression in his eyes that chilled the latter.

"You're going to flunk on the agreement—you've burned it—won't recognize it, eh? Well, I ain't any surprised."

Langford had partially recovered from the shock occasioned by Dakota's unexpected appearance, and he shook his head in emphatic, brazen denial.

"There was no agreement, my friend," he said. "The paper I burned was a forgery."

Dakota's lips hardened. "You called me friend once before, Langford," he said coldly; "don't do it again. I reckon your daughter has told you about Doubler. That's why I came over to get the paper; I knew that if you got hold of it you'd make short work of it. I know something else." He took a step forward and tried to hold Langford's gaze, his own eyes filled with a snapping menace. "I know that you've sent Duncan to town for the sheriff—the doctor told me he'd met him; the doc says that Duncan told him that you said I'd fixed Doubler. How do you know I did?"

"Duncan saw you," said Langford.

Dakota's lips curled. "Then when you heard that you burned the agreement so that you could slip out of your obligation. You've got Duncan to swear that he saw me kill Doubler, and you've got your daughter to testify that she saw me on the trail coming from Doubler's cabin right after she heard the shooting." His voice was coming rapidly, sharply, and was burdened with a lashing sarcasm. "You've got me foul; you've double-crossed me, and damn you I'm going to send you over the Divide in a hurry."

One of his heavy revolvers leaped from its holster and showed for an instant in his hand. Sheila had been watching Dakota closely, however, and when she saw his hand fall to the holster she sprang upon him, catching the weapon by the muzzle. Langford had covered his face with his hands, and for an instant it seemed that Dakota would draw the weapon that swung at his other hip, but when he saw Langford's movement he hesitated, smiling scornfully. He turned to Sheila, looking down into her face—close to his—his smile softening.

"I forgot," he said gently; "I forgot he is your father."

"It isn't that," she said. "He isn't my father any more. But"—she looked at him pleadingly—"please don't shoot him. Go—leave the country. You have plenty of time. Please do!"

In answer he swung her around, grasping her shoulders as he had done

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that day on the river trail, and there was a regretful, admiring gleam in his eyes. "You told him"—he jerked a thumb toward her father—"that you wouldn't bear witness against me. I heard you. You're a true-blue girl and your father's a fool or he wouldn't lose you like he's going to lose you. If I had you I'd take mighty good care that you wouldn't get away from me. But I'm not running out of this game—there's still some cards to be played. Doubler ain't dead yet, and if he had someone to nurse him——" He hesitated and looked at her with a strange smile. "There's a chance that if we can get Doubler revived he can tell who shot him. I heard you say a while ago that you were going over there, and if you're still of the same mind we'll be going."

Sheila was at the door in an instant, but halted on the threshold to listen to Dakota's parting word to Langford.

"Mister man," he said enigmatically, "there's a day coming when you'll think thoughts—plenty of them."

In a flash he had stepped outside and the door closed after him. A few minutes later, still standing beside the desk, Langford heard the rapid beat of hoofs on the hard sand of the corral yard. Faint they became, and more faint, until they died away altogether. But Dakota's words still lingered in Langford's mind, and it seemed to him that they conveyed a prophecy.

(*To be continued*)

RUNNING THE EASTING DOWN

***By* FELIX RIESENBERG**

FROM Cape Hope to Melbourne, with yards squared taut and true,
We drove east under fore course and a rag of tops'ls, too.
The following seas ran close astern, deep troughed and crested white,
Sea horses fearful in the day, mad demons in the night.
With head in spray, 'mid spuming drift, beneath a leaden sky,
We held our course 'fore the westerly gales as the Southern sea birds fly.
In sixty east and forty south, as near as we could say,
We shipped a sea in the last dog watch that washed the wheel away;
To starboard went the helmsman, lashed to the rotten rim,
The hungry waters swept the deck and two men followed him.
"Aft to the rudder tackles!" God, how she thrashed about—
"Man the lee fore braces!" we could hear the Captain shout.
Next she took a comber high over the quarter rail,
As ready hands 'way forward braced sharp the great foresail.
The weather leeches stiffened, she ran up, then fell off,
And a cable paid from the quarter bitts steadied her 'cross the trough.
But aft in the black sea boiling lay death 'neath the storm clouds' frown,
In sixty east and forty south when running the easting down.

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THE SPORTSMAN'S CAMERA

By LEONARD DEWITT SHERMAN

Practical Advice for the Man Who Wants Good Pictures of the Life of Woods and Fields

THE equipment necessary for making good photographs varies so much with the class of work attempted that it seems best to make some general suggestions regarding types of lenses and cameras before trying to select the best outfit for any particular line of work. I beg to ask at this time the indulgence of the reader if my ideas conflict with his own. Far be it from me to claim my way as best. I have not done experimenting yet, and never expect to, any more than I ever hope to make a photograph that cannot be improved upon.

If you have yourself experimented with all the newest inventions and been through the photographic "mill" you surely know better than I or anyone else can tell you what you need for apparatus. At best one can only suggest; you will have to make the photographs, and the most exquisite lens and camera are useless without experience back of them.

That is, after all, the real acid test. I do not think it is overstating the case to say that a fine photograph is about 5 per cent of camera and 95 per cent of the man behind it. This article is intended primarily to aid sportsmen and lovers of the outdoors in selecting photographic equipment for their needs, and if I could offer only one piece of advice it would be not to overlook the value of good tools. Just so sure as "fine tools make fine workmen" in any other line of human endeavor, so do fine cameras and lenses make for the best photographs. You cannot get behind that fact.

Of course, we know and admit that beautiful pictures have been made with single achromatic lenses on the cheapest of boxes; that one can make exquisite compositions in pin-hole photographs, "stuff" that is beautiful in "line, tone, gradation, atmosphere," and all those qualities that an artistic worker likes to talk about; but we are not discoursing about purely "artistic" (how I dislike that word!) photography. So if you have the artistic bug, this is not for such as you. You'd better attend an art-school in that case. I could not even start a sentence of advice, the percentage of "man behind" runs too high—something like 999 9-10 per cent out of a thousand. You have to have the artistic touch wished on you by some doting ancestors.

On the other hand, and what we are trying to get at, are the record-of-fact photographs, brilliant and snappy with definition, but not necessarily devoid of composition; the kind that bring forth exclamations of "How clear!" "What beautiful quality!" etc.

Cameras may be divided into three classes: "hand," "stand," and "reflecting." Under the first head we have cameras of the box or folding type. The Folding Kodaks, Anscos, Premos, etc., are probably most familiar to a greater number of persons. The second heading includes all cameras of the long bellows type that need a tripod for support; cameras adapted for more serious work. The third, the reflecting type, recognized under the trade names of "Graflex," "Reflex," etc., are mostly used for speed pictures, and for some varieties of work are about the last word in photographic equipment.

I am going to divide lenses, roughly, into four classes: The rapid rectilinear, having a working speed of F 8; the "slow" anastigmat with a speed of F 6.3 to F 7; the ultra-fast anastigmat work-

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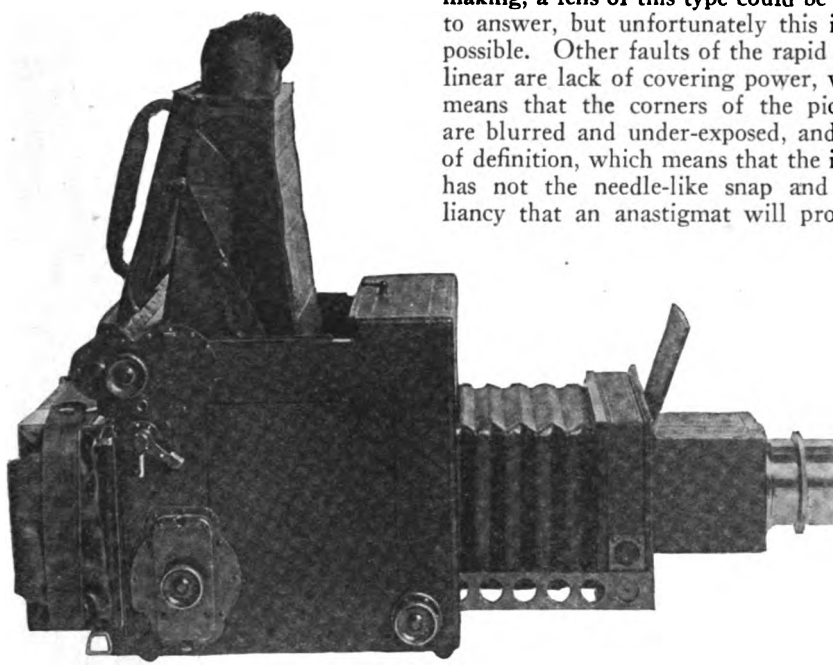
ing at F 4.5, and the telephoto, whose speed depends on the amount of magnification used.

Most of the better types of folding hand cameras like the Kodaks, Anscos, Premos, are regularly equipped with rapid rectilinear lenses, though any of these may be had with anastigmat lenses, and the "specials" are always fitted with them. These are the "slow" anastigmats, none of them working faster than F 6.3.

To get the full value of its speed, the ultra-fast lens of this type, with its aperture of F 4.5, is only suitable for use on the reflecting cameras, both on account of its large size and also because of its lack of "depth of field," which requires very careful focusing when the lens is used wide open. Stopped down, of course, to F 8 or F 11, or what you will, one obtains the same depth and the same speed as with any other lens used at corresponding openings. The real advantage of these ultra-fast lenses is the fact that you have this reserve speed for use if necessary; but because of their bulk and lack of depth, which makes it nearly impossible to guess at the focus, they are not suitable for hand-cameras.

The rapid rectilinear lacks the speed necessary for making photographs in dull light, or faster than about 1-100 of a second in the best light. If one might always choose the conditions for picture making, a lens of this type could be made to answer, but unfortunately this is not possible. Other faults of the rapid rectilinear are lack of covering power, which means that the corners of the pictures are blurred and under-exposed, and lack of definition, which means that the image has not the needle-like snap and brilliancy that an anastigmat will produce. Technically this is caused by astigmatism, and in plain terms means that this lens is not corrected to cause the rays of light from the object to converge into sharp points upon the plate.



A GRAFLEX EQUIPPED WITH A HOME-MADE MAKE-SHIFT EXTENSION CORE FOR THE USE OF LONG FOCUS LENSES—BUT IT WORKS! AS ILLUSTRATED—EQUIPPED WITH FRONT COMBINATION (24 INCH FOCUS) OF A 12-INCH CONVERTIBLE ANASTIGMAT

Comparing a photograph made with an anastigmat with one produced by a rapid rectilinear, the former seems to sparkle, while the latter is flat and dead. The difference becomes more apparent when one makes enlargements from small negatives. An image made with an anastigmat may in some cases be enlarged to ten or twelve times its dimensions without much loss of detail, while

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one obtained with a rapid rectilinear begins to lose definition immediately.

But the anastigmat, being so finely corrected, needs very careful focusing to make it produce its best work. Those needle points of light *must* be brought to a sharp focus if you would get the brilliancy.

The telephoto attachments at present in the market, because of their slow speed, can only be used on stand cameras with much success. Roughly described, a telephoto attachment is a tube having a negative lens mounted in the rear. This magnifies the image produced by the positive element (your complete lens) which is screwed into the front of the tube. The fastest attachment to be had at present is one put out by an English firm. They use one of their portrait lenses working at F 4 for the positive element. With a six-inch bellows extension the lens gives an approximate focus of 25 inches, covers a 4-5 plate, and works at a speed of F 10. An eight-inch extension gives a focal length of 30 inches, covers a larger plate, and works at F 12. A twelve-inch extension gives a focal length of 40 inches and works at F 16. Any intermediate focal length, as well as longer ones, may be produced, but the higher the magnification used the slower will be the speed.

A lens of this make was used by Mr. Radclyffe Dugmore on his recent African trip and is capable of slow snapshots under favorable light conditions. Several firms have recently put on the market telephoto lenses complete in themselves which claim a speed of about F 7. From some experience that I have had with one of them I am convinced that they are overrated as regards speed, because it is necessary to stop them down to get definition. They produce a very soft image and are difficult to focus, as they have practically no depth of field used at their greatest aperture.

However, these lenses are a step forward in objectives for long range work. They are not adjustable to different magnifications, but come in several sizes of fixed focal length. The two largest, of 16 and 22-inch focus, are the only ones that have any real value for photographing distant objects. The 22-inch lens used on a full grown buck deer at a distance of 100 feet gives an image exactly three-quarters of an inch high from ground to tip of antlers.

If one's camera has sufficient bellows capacity, a valuable lens is one known as a "convertible" anastigmat, whose single cells may be used alone at about double the focal length of the complete lens. That is to say, one unscrews and removes the front cell from the tube and extends the camera bellows to twice the length needed for the complete lens.

The single cells have about half the speed of the doublet. Either the front or the back cell may be used. It is more convenient, of course, to unscrew the front combination, but where the bellows is a trifle short you may gain two inches or so (the length of the lens tube) by removing the rear combination and using the front cell.

Varying the Single Cell

Although this is contrary to the advice of the lens manufacturers, it is perfectly practical for pictures that have no straight lines in their composition, as a trial will show. When a single lens is used the makers recommend that the diaphragm be placed in front with the concave side of the lens facing the object to be photographed, because there is less distortion when it is used in this manner. But if you do not attempt to use this single combination on a larger plate, it is perfectly practical to use the front cell before the diaphragm. To be more specific, these single cells, being twice the focal length of the complete lens, will cover a plate twice the size, but inasmuch as you are using only the central portion of their field the distortion is practically nil.

But, again, if you are photographing buildings or anything with straight or parallel lines, especially on a plate larger than the complete lens is listed to cover, *then* you must use the single cell at the rear of the diaphragm or the straight lines will show distortion.

Some of the convertible lenses are symmetrical; that is to say, both combinations are of the same focal length; others have combinations of different

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focus, giving three focal lengths in one lens.

Whether one uses film or plates is purely a matter of convenience. So far as I have been able to determine there is practically no difference in results.

In some cases where a special rendering of color values is desired there are some brands of plates that are to be preferred. Also where extreme speed is necessary there are two or three brands which will give better timed negatives, but some of the plates have not much else besides speed, and are so coarse-grained that enlargements from them are very unsatisfactory.

For telephoto work a double-coated orthochromatic plate of the greatest speed is to be desired, as this reduces the atmospheric haze with which distant objects are surrounded, and which is magnified together with the rest of the subject. Film may be used with success for telephoto work, as it has a certain amount of orthochromatism, or the power correctly to render color values, but naturally it is not so fully corrected as in some of the special brands of orthochromatic plates, as this would not be practicable for general results. The recently introduced "speed" film is a valuable addition to snapshot work, and will be found plenty fast enough for the quickest exposures.

In selecting a camera, the only way to choose from among the large number on the market is to consider the kind of work you are to attempt. There has not yet been produced, and probably never will be, an all-round machine suitable for every class of work. Without attempting to decide the best brand (because the reliable ones are all good) let us look over some of the advantages and disadvantages of the different sizes and types.

You are going into the woods, say, on a hunting or fishing trip, or going to travel, and want a record of your doings. That is what most cameras are used for —the record of fact pictures. Now in the woods—the hardest place in the world to make good photographs—you are going to *wish* to make a lot of pictures in bad light and you will try to make them. Whether you do so or not will depend on the quality of your equipment, and principally on your lens of course. You would not expect to kill a moose or deer with a low-power .22 rifle or save the "big ones" with a fifty-cent fly-rod. No more ought you to expect to obtain the best pictures with a cheap camera.

You take with you a ten-dollar camera, let us say, and when you return you show the results to your friends.

"I don't know what happened to that camera," you apologize; "the kids make corking pictures with it, but these don't seem to be very clear. That one there? Say! I was coming up the trail late one afternoon and stopped to pick some berries beside a brook. The next thing I knew a buck deer stepped into the center of the stream and stood there watching me while I quietly opened the camera and snapped his picture. But it was too dark, I guess, for he doesn't show very plainly. He wasn't more than twenty-five feet away, and I'd give fifty dollars for a good picture of him as he waited there!"

For fifty dollars you could have purchased a camera that would have made a good picture of him, as well as of all the others you spoiled.

Necessary Qualities

The prime requisites for a sportsman's camera are compactness, convenience, and durability. For the ordinary camp and trail pictures that one likes to bring home there is no camera which combines these three qualities like one of the folding variety—the brand doesn't matter.

I do not think anything smaller than a 4x5 size is satisfactory and the 3¼x5½ is probably the most popular size that has been brought out. Of course, smaller sizes may be enlarged, but these I have mentioned give contact prints that are large enough to look at without the aid of a magnifying glass. The folding cameras are compact enough without any loss of durability, because when they are closed the lens, shutter, and all vital parts are protected. They are convenient because they are popular, and films may be obtained in a good many out-of-the-way corners of the world. Fitted with an

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anastigmat lens and one of the better grade between-the-lens shutters a folding camera will do about anything in reason at close range that may be desired.

Some of the foreign cameras recently imported are really wonderful pieces of work, but they have too many folding, sliding, and collapsing devices to stand the wear and tear of a very long life—in the woods at least. They are almost too compact, and once broken are a long way from a repair shop.

For such nature work as photographing flowers, trees, birds' nests, wild game from a blind, or for telephoto work, or for any subject where it is desirable to reproduce a large image, the stand cameras, with their long bellows and various adjustments, are necessary. If one attempts to photograph big game or waterfowl, especially from a boat, there is no camera so good as one of the reflecting type, because a long focus lens, which must be used, is very difficult to focus by merely guessing the distance to the subject.

These cameras are very costly, very bulky, and the focal plane shutters with which they are equipped are much more complicated than is necessary, but, as the advertisements say, "they show the image, right side up, the size it will appear in the negative, up to the instant of exposure."

Although my personal choice is the 5-7 size, 95 per cent of game pictures are at long range, and so the 4-5 size is generally considered large enough, inasmuch as it will be impossible to fill the plate with the image anyhow. To prove the rule it is well to state that Mr. Dugmore made one telephotograph of a zebra which approached closely enough to more than fill the 5-7 plate he was using.

The different makes may vary somewhat in the latitude of their focal capacity. A camera for all-round work should allow the use of both long and reasonably short focus lenses at will, but for distant work the longer the bellows the better, because one needs a lens of at least 11 or 12 inches focus, and as much longer as it is possible to use.

One may easily save a few dollars by purchasing used outfits from the second-hand dealers, most of whom have the square deal habit. The average saving will be about 25 per cent.

One satisfaction about owning a fine anastigmat lens is that it has a permanent value and may always be disposed of to a dealer at from one-half to two-thirds its list price. A good camera of recent model and in fair condition is also in constant demand among the second-hand men. Remember this when buying a used outfit and get as late a model as possible. The manufacturers are traveling so fast with new improvements that one has to go some to keep up.

A series of short articles on OUTDOOR PHOTOGRAPHY by Warwick S. Carpenter will appear in OUTING early in 1914. He will discuss THE LENS, THE PLATE, DEVELOPING AND PRINTING from the standpoint of the best amateur practice and with the backing of his own long and successful experience.

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TROUBLE

By WALTER MYERS

Much Ado About Nothing—but the Mayor Didn't Know It

"READ it," said the hot-lunch man gloomily, offering Billy MacManus the crumpled paper. "Read it, and don't tell me that times is good, young man. It's bad enough back East, but what do I find when I come 'way out here in Arizony, where things is so uncivilized that folks ain't hardly growed hair yet from bein' scalped so recent by the Indians? Why, graftin' and stealin' just the same."

"Quite, quite true." All the gloom of the hot-lunch man was in the voice of Billy MacManus, as, solemnly nodding, he spread the paper to the glare of the arc lamp just above the small, roofless lunch wagon.

The man behind the counter of the wagon stretched out one long arm and marked the place with a bony finger. Billy MacManus read with joy, while the arc lamp bubbled and chuckled and winked:

"Mr. Editer: You better back down on your atacts of honest men. We don't want to see no more lyeing about us stealing city money for years. If we do you *look out.* I mean what I say.

"Yours,
"A HONEST MAN."

"*This* was shoved under our door last night. Without one iota of perturbation we surrender to the titillations of our risibilities. We will continue to print the news and put facts before our readers and threats will avail no more than the gusts of the sirocco on the ebon cliffs of Atlas. We brand the threatener as a coward. Yes, we ask why he threatens. We have accused no one. We have merely asked what our city administration has done with our public money during the last five years. Ah, do the pangs of conscience pulsate? Does the red slayer know it slays? Does the shoe pinch, O Honest Man? Where *has* the money gone?"

"Awful," said Billy, his boyish, good-humored face drawn lugubriously. "Awful."

But the hot-lunch man was busy with a belated customer.

"And yet I wouldn't mind knowing the man who wrote that editorial," Billy added softly. He grinned in the shadow of his broad hat and again unfurled to the cooling breezes of night the fevered *Weekly Ash Brook Plainsman.*

Before him lay "the humiliation of our fair city." It clamored from scare-heads; it shouted from double-spacing and heavy-face; it asked and re-asked with a dozen insinuating variations *what* had been done with the town funds for the past five years. And as Billy read his grin widened, for there was not one word of direct accusation, not one incriminating fact.

"That," said the hot-lunch man heavily, "has been going on for two weeks, ever since I come to town. An extra out almost every day showin' new graft."

But Billy had found a nugget and was holding it happily to the light:

"If anyone thinks that *The Weekly Ash Brook Plainsman* is to falter feebly on the patent path of duty because the editor-in-chief is East corralling a wife, he is laboring under an obsessive increment of error. The stronger will we be; the higher aloft will we eructate the banner of courage. Our chief is trailing with arduous assiduity a widow with three children. Let the race be to the swift and the battle to the strong!"

"Ain't it just as I been sayin'?" The hot-lunch man, leaning forward, hands sprawling widely on the counter, emphasized his words with thrusts of his lean neck. "Graft and stealin' everywhere.

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And there ain't no hopes, either. Why, even them that's hollerin' loudest for these here referendums and recalls is doin' it only so's you can't hear the folks that's been stole from whoopin' it up and yellin' while they counts their cash and finds it short. No, sir, nobody's takin' much pleasure now'days, but just livin' ——" The voice of the hot-lunch man stumbled on itself.

There had been a whistle around the corner, a steadily approaching, perfectly tuneless, laboriously jerking, insistently cheerful whistle. Now the whistle and the man who made it were beneath the arc lamp. And it was not the whistle that tripped the tongue of the hot-lunch man; it was the whistler. The head of the man was but little higher than his waist should have been; on that head was a great straw hat that flapped and sagged to the wearer's gait, as with what was left of his legs he stumped and swung along much as a small boy walks on stilts.

The whistle stopped, but there was a voice to match it, big and round and cheerful; and there was a face disclosed by the pushing back of the hat, big and round and cheerful, also red.

"Hello, brothers," boomed the voice. "Hello, if here ain't a hot-dog stand. Give me a hot dog, brother. I just hit town and ridin' always makes me hungry; by goll, I'm hungry. And you're in a nice little wagon. Rigged it up yourself, didn't you?—just big enough so you can reach everything. Well, ain't that fine?" The legless man mopped his face on his sleeve.

The hot-lunch man looked at Billy, vindication in his eye; then with gloomy relish that hardly allowed him to take his gaze from the unfortunate one before him he prepared and handed down the sandwich. But the legless man had turned his attention and his voice upon Billy. He hailed him as brother; between bites he stormed Billy with questions, his eyes wide, his face glowing with interest. He marveled that Billy was just in from a railroad locating survey up country; he exclaimed upon the fact that Billy was twenty-four years old and six feet tall.

Here the hot-lunch man could no longer restrain himself. "You're in a awful fix without no laigs, ain't you?" he gloomed.

The foreshortened one positively beamed up at him. "That's just what folks is always sayin', 'Shorty, ain't you in the hell of a fix without no laigs?' And then I comes right back, 'I ain't never remembered havin' laigs. If you didn't never have no steam yacht, would you be in a fix without one? No, course not. Same with me.' Why, I don't want laigs; they'd spoil my business; I couldn't sell my pencils and stuff on the street. Why, I'd be in a hell of a fix *with* laigs."

The hot-lunch man busied himself with his gasoline stove.

Billy MacManus clasped to him *The Weekly Ash Brook Plainsman* and chuckled into its exclamatory folds. "Maybe," he suggested very, very mildly, "this trouble here in the paper doesn't amount to much after all."

The hot-lunch man regarded him sternly. He leaned across the counter again, neck outstretched. "Say, if it ain't real trouble and misery what's the meanin' of all the things I've heard and seen to-day? Men talkin' low together —the city marshal out wearin' a pistol— lots of men sneakin' round to-night tryin' to look as if they hadn't ought to be home in bed. Oh, I'm just waitin'."

But the curiosity of Shorty rose in its might and clamored. Then they fed it explanations, fairly pouring them into the capacious ears and mouth and eyes wide in the red face until the clamor became that of wonder and consuming interest. "Will this mayor and his gang start anything to-night? By golly, if they do I'm goin' to see it. Just tell me where it's goin' to be and I'll get up a telegraph pole and look on. I can climb any pole that has them iron spikes on it, just like a fly goin' up a screen door; that's what I always does in a big crowd. Had I better climb this pole right here?"

"The great problem in this world," said Billy judicially, "is not so much to find *a* pole, as to find a pole that something will happen under."

"That pole," put in the hot-lunch man, "is likely to be down yonder on

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the edge of town alongside the editor's house. He prints the paper and lives in the same house."

"Right you are, brother. Now, if I just knew——"

The hot-lunch man leaned down and laid a hand on Shorty's shoulder. "There's a man that knows," he whispered hoarsely, jerking a thumb backward.

The man that knew was passing up the opposite side of the street, a lean, big-hatted individual who seemed to Billy somewhat worried and preoccupied by the things he knew.

"It's the town marshal," supplemented the hot-lunch man in a still lower whisper. "I saw the butt of his gun plain when he was by here a while ago. It's down his pants in front."

In fascinated silence Shorty peered out from behind the lunch-wagon and watched the man out of sight around a corner. Then he spoke. Was he, Shorty, the one to stand inactive when the very genius of things-about-to-happen had passed before his eyes? "By golly, brothers, I'm goin'. I ain't goin' to miss anything in any town worth seein'. Just tell me where that print office is and I'll go."

"I'm with you, Shorty," said Billy MacManus promptly.

On stranger quests with equally strange men Billy MacManus had ventured and never been the sadder for it; and forth now he went right joyously through the streets of this odd little desert town with its air of borrowed Eastern smartness. Line for line with Shorty he played his part, too; and villain of the movies never slunk more pussy-footed through shadows or scouted more laboriously at lighted corners than Billy, looking with suppressed chuckles for things that were not, until—well, there came a time that night when Billy found himself in the very midst of things that undoubtedly were—nothing less than the beleaguerment of *The Weekly Ash Brook Plainsman.*

It was really Shorty's magnificent disregard of danger that did it, leading by a devious and dangerous way through the last haphazard block and leaving them crouched behind a high wire fence of the woven kind. On the other side of that fence Billy knew lay the backyard of *The Weekly Ash Brook Plainsman,* and likewise he knew that in the shadows front and rear other men were watching the little house beyond the fence.

Against this fence Billy and Shorty might in all probability have rested watchfully and quietly for some time, but Shorty was hampered. Barrels and the like filled too much of the foreground; horizons were too limited. Near Shorty on his side of the fence was a heap of things in general. Shorty made for it. In a moment he was head and shoulders above the fence, and Billy MacManus, in earnest pantomime, was begging him to come down.

Then it was that things really began to happen.

What Shorty saw was a dim figure that made for him from somewhere close at hand, came near enough to begin a whisper, stopped, turned, dodged, started to run, struck something, went down backward with a yell and the crashing explosion of what must have been a pistol in the runner's hand. What Billy heard was the sudden twanging vibration of a short post nearby that told of taut wire, the racket of the fall, and the clatter of Shorty leaving his place of observation head first.

Panic was let loose. Another shot was fired. A window slammed up and someone added two hasty reports for the credit of *The Weekly Ash Brook Plainsman.* Other windows in the neighborhood went up. There was a pelting of feet. Shorty dived like a rabbit into the clutter against the fence. Billy alone in the darkness with the noise of runners and groans and curses from the other side of the fence took to his heels, ran low along the fence, heard a man coming, turned and ran with equal earnestness the other way.

At the end of the fence Billy found himself in the meager front dooryard of *The Weekly Ash Brook Plainsman.* He hesitated, saw a suspicious movement ahead, jumped in closer to the protection of the house,—and straightway became involved with an opening screen door and a man who was in a hurry to

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get out of that door. And there, a second later, Billy stood just inside the door, staring into utter darkness and listening to the rapid breathing of someone who had just urgently requested him to stand still.

The voice came again, a trifle unsteady but hardly reassuring in what it had to say: "I've—I've got an automatic in each hand—and if you start anything I'll get you sure."

Many, many things Billy MacManus might have spoken, but in none of these utterances could Billy have put more feeling than in what he did say:

"For the love of Mike!"

Silence fell.

Billy spoke, still fervently. "See here. I wasn't trying to get into this house. I was—was running, you know. Now, just let me open this door and I'll start running again, and if I ever——"

"Don't move. If you do, I'll cut loose with both guns. Besides, there's a bear trap rigged up just outside and you're standing on a trap door that I can spring and drop you into the cellar."

Something in the hyperbole of all this was very reassuring to Billy. "Well," he said, more cheerfully, "since you insist, I'll stay and chat a while. Did you —did you ever think, for example, that the race might be to the strong and the battle to the swift? Or shall we have *much* rain?"

The voice interrupted. "Who are you? You're no native. What are you doing here?"

"I was," said Billy, now thoroughly at ease, "out walking with a little friend, whom I left—in a barrel, I think, hard by your garden wall. And——"

"Yes, yes." There was worry in the voice. "I believe you, oh, how I believe you, but I grow distraught. Please run on now, beat it, vamoose, shoo! Or, say, you can lock that door, light a match so I can look at you, and then help me see to the back door and windows. Which is it, quick?"

Billy promptly fumbled with the door, found a match, lighted it, and held it high. He saw a little room filled with type-cases and a printing-press. Before him stood a slim young man about his own height, who held a pistol in one hand. Very solemnly the two regarded each other till the flame scorched Billy's fingers.

"Mr. Editor," said Billy as he dropped the glowing stub, "I'm mighty glad to know you." There was sincerity in Billy's voice, for at first glance he had seen in the other's face a kindred spirit.

Very soon Billy MacManus knelt by an open upstairs window, straining his eyes into the darkness of the back yard. Somewhere out of sight men were talking.

"Right down there," Billy whispered, "somebody stubbed his forehead on your wire clothes-line, I think, and hurt himself with his gun."

Nothing stirred in the back yard; the sound of voices diminished.

"Carried off on his shield," said the editor at length. "He was too lively to leave in the back yard; too many neighbors were coming. Or maybe your little friend—— In a barrel, you said? May she not have been uneasy, not to say distressed? Strange, strange quarters for a young lady."

"He is hardly," said Billy reflectively, "what you might with perfect propriety call a young lady. He is a man of parts with—well, part of the parts in other parts. And yet he is a cheerful person and can come to no great harm."

The editor leaned from the window and very carefully regarded something outside. Then he spoke: "In a moment I may grow curious and I'm horrid when I'm curious. Tell me all. I want to know."

Very briefly Billy told of the hot-lunch man and Shorty the investigative.

"Now," said Billy at last, "*I* want to know. I've seen lots of papers in my life, but *The Weekly Ash Brook Plainsman*—well, tell me why."

"It's Hoxsey. Among men there is but one Hoxsey. He owns this paper and he once owned me. He is——" An appealing hand pressed Billy's knee. "Just think of a man so mean that you can't believe him real. Have you thought? Well, Hoxsey's meaner than that."

"Dear, dear," said Billy drearily.

"Why I stayed and let him own me I don't really know. Maybe it was to

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see how mean a man could be. Some day I'll write a book, no, a *magnum opus,* no, a cycle about it. But the day came (oh, happy day!) when Hoxsey went East. A widow, you see. She has children. They can learn to set type. She can keep the house straight. May she be seven times meaner than Hoxsey? May each widow's child—enough! Hoxsey went two weeks ago and left me in charge."

"But why——"

"Firstly, revenge. Secondly, excitement." The assistant editor chuckled. "Oh, the gorgeous, giddy excitement I have stirred up! Such a tangle for old Hoxsey to straighten out when he comes back day after to-morrow. Such worriment and puzzlement and dull, brutish anger over they don't exactly know what, as I've called forth in this semi-aboriginal community. And honestly, too, I may have made a foreflushing old hypocrite sweat. The mayor and his bunch just can't produce accounts, good or bad. It's ten to one they never kept any; they're not strong on formalities in this country."

Billy chuckled in sympathy.

"Oh, yes, in the words of our society column, 'a most delightful time was had by all.' And now, to be frank, I've had almost enough. If you had been three seconds earlier or later at my door we might both have been very much elsewhere."

"Why not go now?" Billy asked. "I think the coast's clear."

"Well, I don't like to do that. After all, I don't want this shack burned or blown up."

"Can't we leave a light burning and make the mayor and his gang think——"

"Old Everts hasn't nerve to be with his gang, or I'm mightily mistaken in my man."

"If you just had——"

"Say, oh, say, I've got it—a plan, a scheme, an inspiration! First I'll call reinforcements, some of old Hoxsey's trusties. And while they're coming I'm going on the warpath. Going to sneak over to old Everts's place and pin a note to his front door with a butcher-knife—a note to make strong men tremble and children scream, full of threats—exposure, detectives in town, and plumb utter destruction. Won't be gone more'n a minute. Stay here and wait for me."

Thus it came that Billy MacManus sat alone in the darkness of a strange man's house. "Whew," remarked Billy to himself, "the what-do-you-call-it on the ebon cliffs of Atlas. He's it."

But not long did Billy sit in self-communion. Someone rapped on the front door. Billy went down to investigate. It must be the reinforcements. Billy's fingers were on the key when doubts came. He voiced his question:

"Who are you?"

"It's us."

This was not perfectly reassuring.

"Who are you and what do you want?"

"What—what do we want?" The gruff voice outside suggested astonishment, even irritation. "It's us three. What do you want, callin' us up and tellin' us to come?"

This was certainly identifying. Billy opened the door. Three men entered, and one of them, after some fumbling, clicked on an electric.

Straightway there began for Billy, blinking in the sudden light, a period of considerable unpleasantness. The three men were grizzled and grim; they had about them an air that savored strongly of alarums and excursions. The editor's assistant had told them nothing of Billy. Therefore he found it necessary to explain very, very carefully. Minute after minute Billy explained. Billy really exerted himself, threw into his voice all the winning good-fellowship, all the guileless pleasantry of which he was master. And yet—can anyone explain adequately to three men, grizzled and grim, how, strolling by the house of a stranger at dead of night and being affrighted by violent deeds, one took refuge where no sane man would, and how immediately the beleaguered stranger, leaving the protection of his own house to visit the home of his enemy, failed to return?

"We'll wait a while," said the oldest of the three at length. "Then if the kid don't turn up we'll take this *hombre* down and have him locked up."

Earnestly Billy began all over again. He was utterly disregarded. One of the

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three watched him and the others began a search of the premises. It was this search that brought matters to a crisis. Something was found in the back yard; consultation was held, of which Billy and his captor heard only the words, "There's blood on this hat."

Thereupon Billy's man turned his attention to the center of interest, demanding to be told—and Billy quietly and swiftly propelled himself through the open door and across the front dooryard. Behind him a grim and grizzled man shouted something and, with a gun, shot presumably at someone. Billy ducked around the fence, sped along it to the dim and devious ways which he had already traveled with Shorty, and ran until he heard no sound of pursuit.

At a suitable distance Billy paused to consider. He panted. Also there were peripatetic cold spots along his spine. Billy had never before been shot at. There came to him now a vision of the lodging-house where he had left his very meager outfit and of a white iron bed wherein an innocent man and weary might rest him. Refreshed and encouraged, he made for that bed, and he went as an innocent man should go. He did not even hurry past arc lights.

It was indeed under an arc light, just at a corner (as so many things are) that Billy met what was to keep him from the white iron bed. Two men proceeded together slowly and in earnest discourse, a very tall man and a very short man who wore a flapping straw hat—marshal of Ash Brook and Shorty. The hand of the marshal clutched the wrist of Shorty. So might a stern father lead a reluctant son along the paths of virtue. There was, too, upon the lean face of the marshal the harassment and determination of fathers and in the round countenance of Shorty the outraged innocence of sons.

Billy's presence made little difference in the stream of Shorty's protesting explanation; that stream was already bank-full. "Brother, by golly, this cop ain't got nothin' against me except I'm a-wearin' a big straw hat!"

"Come on along now. There ain't another hat like this in all Arizony; we wears felts here. You're the man." The marshal's voice was severe and testy, yet withal lacking in conviction.

"But ain't I been tellin' you I got to wear this hat when I'm settin' out in the sun sellin' my stuff on the sidewalk?"

"Don't make no difference. Come on along now, *pronto.*" Though the marshal tugged at Shorty's wrist, it was but gingerly, as though there were grave danger of further dismemberment.

"But," objected Billy mildly, "you can't arrest a man just because you don't like his hat, you know."

The marshal, after the manner of irritated people, whirled upon Billy. "You keep out of this. Who are you, any way? I got half a notion to take you along and lock you up, too. You're mighty thick with this here fellow, it seems. Anyhow, it ain't just the hat. A man in a big straw hat jumped on one of the boys just as he was goin' home, throwed him down, kicked him, busted his head, and shot him in the laig. This here is sure the hat. Come on now."

Very, very reluctantly Shorty went and protestingly. Billy could do nothing but follow.

"By golly," clamored Shorty, "I tell you I seen him do it. He done it all himself."

"Busted his own head and kicked himself and shot his own laig! Come on now. Quit pullin' back."

"But, by golly, brother, how could I have throwed him down and kicked him? I ain't got the laigs."

"That's it," put in Billy resolutely. "His legs, man, look at his legs!"

Doggedly, yet with downcast eyes, the marshal replied: "I don't care whether he ain't got the sign of a laig or has four laigs. He's got the hat and he says himself he was there. Maybe he knocked Bill down, took off his wooden laigs, and hammered him. And I tell you"—the marshal stood erect now and spoke as a minion of the law and not as the duty-ridden father—"I got my eye on you, too. You look out."

Thus the marshal prevailed and led the way. Billy, in this new interest, forgot all about the editor of *The Weekly Ash Brook Plainsman* and the grim and grizzled men.

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At length, to complete the cycle of haps and mishaps, they came into the light before the very wagon of the hot-lunch man. At once Shorty made desperate appeal for certification of good character.

"You tell him, brother. You tell him what you know about me."

Impartially and severely the hot-lunch man did, while interested citizens began to join the group. It was no use. Though the fatherliness of the marshal increased, the dogged, guilty fatherliness of the parent whose authority is endangered, he was not persuaded. He spoke, fortifying himself:

"Laigs or no laigs, here's the hat. Ain't another like it in all Arizony. Come on now."

But Shorty never came. Who did come was a grim and grizzled man, materializing suddenly and purposefully in the glare of the arc not ten yards from Billy MacManus. In a flash Billy was no longer the friend absorbed in the misadventures of Shorty; he was the stranger and the alien who had committed himself by running away from a house of mystery. And in that very flash, so to speak, he had been denounced, had thrust aside the marshal of Ash Brook, and dodged up the street and into the mouth of an alley. The very closeness of the pursuit saved him. Just within the alley his toe hit something; and a jarring, scrambling fall left him dazed behind a shadowy, heaped-up protection of some sort while the chase clamored by.

In an instant Billy was back at the mouth of the alley. The hot-lunch man was the only one in sight, but down the street there was shouting and up the street there was sound of running, and back in the alley men blundered and fell over tin cans and yelled. A maddening problem truly: given the hullabaloo and hurry, to find in an empty street refuge for one full-grown man.

Yet Billy found it. He found it in the hot-lunch wagon, under its counter, back of the white oilcloth cover, and almost beneath the feet of the astonished proprietor.

"Stand by me, old man!" panted Billy, as with a scattering of tin paraphernalia he dived into shelter; and the hot-lunch man was too dazed to do anything else.

Then came many eager citizens of Ash Brook to be sent on their way. Then came the marshal with some of Billy's pursuers.

"Where'd my little man go?" he breathily demanded. "I told you to watch him."

The hot-lunch man spoke with dignity. "I ain't no policeman. But I did watch him. He went up—up that way sort of. I reckon he's hidin'. He didn't run. Go find him if you want him."

The marshal went, a vociferous company at his heels.

Then the hot-lunch man spoke solicitously to his stove. "I reckon now you ain't goin' to doubt there's trouble in this town. You're sure in an awful fix, but that Shorty's worse."

"Why? Where is he?"

"Up there." The hot-lunch man jerked a thumb in the general direction of the stars.

Billy gasped and looked up; but he was blinded by the arc, which hung from a short iron support just above. Then a voice came from beyond the glare, a voice hoarse with caution. "By golly, brothers, quit a-talkin' or that cop'll get the whole bunch of us. He's fierce."

"He clumb the pole that the arc light's fastened to," explained the hot-lunch man. "Now, he's roostin' back of a kind of box fixin'. What he's goin' to do when day comes I don't know. Look out, somebody's comin'!"

Billy retired behind the oilcloth. He rested his weary forehead upon a bag of fragrant wienerwursts and thought. Loquacious citizens about the lunch wagon gave him ample material for reflection. They came and went, alone or in groups, but in constantly increasing agitation. They filled the air with loud rumor, with accusation, and bitter recrimination. They spoke of revolvers and ropes and the law's delay.

Slowly Billy gathered that Ash Brook had divided against itself that night. There were those who would uphold to the death the integrity of the mayor; there were the adherents of the grim and grizzled ones, whose threats were fearful to hear. Murder was bandied about. The mayor could not be found; where

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was his mutilated body? The assistant editor was gone; where was his reeking corpse?

Just one thing prevented bloodshed, and Billy squirmed as he heard it. It was voiced by certain strong-lunged ones that the duty of all good citizens was to unite against an alien foe, a bloodthirsty, treacherous band of ruffians who played fast and loose with either faction, who varied in height from three feet to seven, and who had beset the town for no one knew what purpose of plunder and rapine. Lynch 'em!

It was some time before the hot-lunch man found the chance to drop Billy a few words. In these words was much gloom and unease. "I wish I was shet of you. What's goin' to become of me if they find you in here? Why don't you crawl out and run?"

Here was a new danger. Billy had somehow to stave it off. "You've got to stand by me. Your life won't be worth ten cents if they see I've been in here. And there's Shorty, too. You saw him go up that pole——"

Then came Shorty's voice, husky and despairing. "Yes, brothers, and I'm slippin'. My hands is givin' out and——"

"Sh-h!" The hot-lunch man silenced him. People were closer now.

"I can't wait," went on Shorty agonizingly. "I got to come or I'll fall!"

In desperate whispers Billy and the hot-lunch man besought him to stay where he was. But Shorty came. Swinging, jerking, and puffing, he came down out of the shadow. Billy braced himself for the yell and rush of discovery.

And now the arc light, which up to this time had been chuckling inanely to itself now and then, being no doubt suddenly stricken with the need of proper theatrical effect, began first to gurgle and choke, then to flare from utter darkness to blinding light, and finally almost to beat at one's eyeballs in a mad flickering flutter.

Through this unholy illumination Shorty descended to earth, where he hesitated never a second, but making for the hot-lunch wagon, somehow wriggled inside and under cover. The yell and rush of discovery did not come, but still the arc lamp refused to burn calmly; it must have known that there was yet more dramatic action to be staged.

The arc lamp was right. At the foot of the pole Shorty had dropped his hat. Men passed by. Straightway the marshal of Ash Brook was holding that hat to the wild, uncertain glare and heaping accusation upon the hot-lunch man.

"This hat wasn't here a while ago. The man that wore it has been here again. Where is he?"

"I—I can't say," replied the hot-lunch man unhappily, standing astride of Shorty.

"You come along with me." The marshal of Ash Brook, it is to be remembered, was a man who had that night endured much.

"What!" The hot-lunch man's voice went to falsetto. "You ain't goin' to arrest me on account of a old straw hat?"

"Well, you come on." Once again the marshal spoke with wearisome doubt and determination.

The hot-lunch man, making inarticulate noises of protest, stepped out. Hope came to Billy.

"Somebody'll get his chuck, Ed," said a voice in the crowd.

"That's right. We'll take it along."

The hot-lunch man spoke with suddenness. "Oh, no. There ain't no need of it. I'll go."

"Oh, we'll take it right along. Come on, ketch hold." Plainly it was the true nature of the marshal of Ash Brook to do favors.

"No. Just leave it. There ain't nothing in it any good."

"Ketch hold now and come on. I ain't goin' to have you bringin' up claims on me if you ever get out. Besides, I'm goin' to be square."

The wagon creaked and moved. Billy heard the footsteps and voices of a numerous following; moment by moment he waited for the touch of a foraging hand.

"When we get there, we'll unpack your stuff and put it away." It was the marshal who spoke. Billy almost groaned.

"There," it seemed, was not close by.

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At any rate, to Billy it was miles and miles. Apparently, too, the whole population of Ash Brook had joined the procession. Billy was sure he heard the voices of the grim and grizzled ones.

On and on the wagon jolted; hot water splashed down from somewhere above; Shorty made nasal sounds of distress. It was hours and hours before the first hint of comfort: the escort at last seemed to be diminishing. And then finally came the noise of a slow-going train. The wagon stopped; the train ground along.

A glowing thought came to Billy: if he and Shorty were only on that train! Billy very cautiously peeked out under the stove. It was dark; ahead were four dim figures; no one else was to be seen. Why not try to creep out? Section-house and tie-piles near by; lots of noise; and people always stare at a passing train as if it were the last of its kind. And yet the risk, the scareful risk!

They tried it, Billy and Shorty, crept out at the back of that sheltering wagon, trembling in the pitiless light of the stars. On all-fours Billy scurried among the ties and to him Shorty rolled. And never again did Billy and Shorty lay eyes upon the hot-lunch man and the marshal of Ash Brook.

Some minutes later, straining and boosting, Billy got Shorty through the door of an empty and then climbed in himself.

"By golly, brother," panted Shorty, "ain't it been fierce? Why——"

"Introduce me to your little friend and tell him not to talk so loud," chuckled a voice at Billy's elbow.

"The editor," gasped Billy.

"None other."

"But what—what——"

"Many, many, oh, multitudinous things. I got that missive to the mayor. Honest, it was my masterpiece. No man ever dared to write the like of it before. And then—well, there was *so* much excitement and agitation that I——"

"Never knowed any fool folks could get in such a mix. Why, brothers——" It was Shorty, and he was in full voice.

While Billy was pleading with him for caution the train started. It did not go far. It stopped where a bright light shone full on the door. The three hurried into the darkest corner. The train jerked forward again and then—panting, scrambling, a man clawed his way through the door and lay exhausted at full length.

Billy heard the assistant editor choke; Billy felt arms about his neck and the pressure of a body shaken with emotion. Then into Billy's ear the assistant editor hissed the reasons.

"In the morning we'll—we'll ask that man *where* the public moneys of Ash Brook have gone. That's old Everts himself, the mayor of Ash Brook!"

THE REAL OBJECT OF COLLEGE ATHLETICS is the article with which Walter Camp will open the December number of OUTING. It is an authoritative discussion of the vital, permanent elements in sport.

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McLOUGHLIN, THE CHAMPION

By E. B. DEWHURST

High Spots in the Career of America's Greatest and Most Interesting Tennis Player

SON of an Irish father, from whom he undoubtedly inherits his physical characteristics, the red hair and the superabundance of freckles, Maurice Evans McLoughlin was born at Carson City, Nevada, on January 7, 1890. At an early age he moved to Philadelphia, where his family resided for some years, but later removed to San Francisco, and it was in the last-named city that his tennis was developed.

Environment, that factor that plays such an important part in development, is responsible for much in the fashioning of the game that is played by the brilliant Californian. Learning his game on the asphalt courts on which almost all tennis is played in the Far West, he developed naturally into a player who relied more on the dashing brilliancy and smashing force of his strokes for success than on the accuracy and delicate placing which betokens the player who has learned his game on the turf courts of the East.

At an early age he attracted attention by his sensational game and became one of the little coterie of young players who were assisted and encouraged to improve their game by a familiar figure in tennis in San Francisco, Mr. R. H. Martin, one of the old players who devotes his spare time to the development of tennis genius wherever he sees it plainly manifested. Under the able tuition of this enthusiast, McLoughlin rapidly improved and in 1908 and 1909, having vanquished everyone on the Pacific Coast he started East to try his hand on the leading grass-court players of the country.

In his first appearance at Newport he began by defeating his fellow-townsman, Melville Long, in five sets and followed this up by winning from Richard Palmer and G. F. Touchard. He met his match, however, in W. J. Clothier and went down to defeat in four sets. So far he had made a remarkable showing, as his inexperience on grass was a heavy handicap, and he gave promise, even then, that he was to be a factor in the tennis world in the future. Recognizing his possibilities, the selection committee for the Davis Cup sent the two California youngsters, McLoughlin and Long, to Australia to meet Brooks and Wilding. As was almost expected, the boys fell before the skill of their more experienced antagonists, failing to win a single match, but McLoughlin took a set from Wilding and was the better for the magnificent match experience that the series gave him.

Again the following year McLoughlin came East and made a tour of the great tournaments of the Eastern seaboard. He won at Longwood, but was forced to bow in the challenge round to W. A. Larned, who was then in the height of

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his power and practically unbeatable. Among his victims at Longwood was Beals Wright, and such a victory advanced him far up the ladder of fame. However, again at Newport he failed to win, falling before the skill of Beals Wright on a wet day when everything was in favor of the Eastern player.

The year 1911 was one of progress for the youth, whose game each year was losing a little of its crudeness without diminution of its power. The coaching that he had received from the champion, Larned, was beginning to show its effect, and though he lost to Touchard at Longwood, no one could stop him in his progress to the finals at Newport, where he got back at Touchard in decisive style on his way through. But his time was not yet. Meeting Larned in the challenge round, he was beaten in three straight sets, but they were sets of unexampled brilliancy and the undefeated champion never played better.

For the second time McLoughlin was sent to Australia with Larned and Wright in the quest of the Davis Cup, to be used in doubles, and as a reserve man in singles. He and Wright lost to Brooks and Dunlop, and, being substituted for Larned on the final day, he led Brooks for three sets and only lost when the great Australian put forth all his cunning and strength.

Next year he was to reap the reward that he had struggled for for four years. With Larned out of the game there was nothing to stay his triumphal progress. He won the Western event and followed by winning the Longwood, the New York State, and finally the National at Newport. A season without a single defeat was his startling record for that year, in which he also won the National doubles with Tom Bundy.

With the return of the Davis Cup to England this year it was recognized that America's chances of regaining it were of a much more roseate hue than for some time past. It was within striking distance, and there was little doubt that the best American team procurable would make the trip. Naturally the first place was conceded to McLoughlin, and he justified his place by annihilating the Australians in the first round played in New York. On the landing of the team in England McLoughlin became the sensation of the year by defeating all comers in the All-England Championship, but he was beaten in the challenge round by Anthony F. Wilding in three straight sets, in a match that the winner conceded was the closest and the best that he had ever played.

In the further rounds of the cup series McLoughlin was pre-eminent, though he was forced to five sets by Froitzheim, the German player. Again he met his match in the person of that great player, J. C. Parke, who was able to produce against him in the challenge round of the Davis Cup Matches that magnificent game that has won him the name of the "Super-Parke," and he lost in a five-set match that has been described as the most exciting contest ever seen at Wimbledon. In the doubles next day McLoughlin was at his best, and his daring and brilliancy saved the day for the challenging nation. On the last day he came into his finest streak and swept C. P. Dixon from his path in three straight sets and the Cup was won, after ten years of striving.

AN ENGLISH VIEW OF THE AMERICAN VICTORIES OF 1913 IN WHICH MR. M'LOUGHLIN WAS A PRIME FACTOR

Punch represents Uncle Sam as saying: "Say, John, what's the game, anyway? Cricket? Well, see here, mail me a copy of the rules with date of the next International championship. I'm just crazy on cups."

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On his arrival in America he again showed that he was the best in the country by winning for the second time in succession the National championship at Newport, beating, in the order named, Clothier, Johnson, and in the finals R. N. Williams; while, with Bundy, he annexed also the doubles for the second time.

Now as to the weapons with which he has made good, his game and how he plays it.

Essentially his game is one of attack. Almost at no time does he defend, hence his main weapons are those of the attacker, the service, the volley, and the smash. Without doubt his service is the best in the world to-day. Brooks has as much twist and is more accurate, but no one has the terrific speed that wins him an average of one clean ace in every service game. With such a service his volley is ready made, and he takes full advantage of the command of the net his delivery gives him by bringing off cross-court volleys that are masterpieces of skill and power. Overhead the world has known no such smashing since the days of Lawford. Close in or far back in the court, there is no difference. With infinite risk of failure he winds himself up like a huge spring and hits them with all his might, often in mid-air as he strikes, and they rarely fail to go in the opposite court.

His Point of Weakness

Three years ago his ground strokes were manifestly weak, but, realizing this, he has improved them greatly till, at the present time, they are far above the average. On the forehand he is severe and hits the ball with a lot of "top" and pace, relying more on actual force than on any delicacy of placing. On the backhand he is weak in comparison, his strokes on this side being more defensive than offensive, and this is the only joint in his armor.

Here in this "heel of Achilles" his conquerors have attacked him and sent their shafts home. But to do this it needs the skill and power of a Brooks, a Wilding, or the Super-Parke to handle the lightning service and hold off his furious attack till it can be turned against his one weak point.

Physically he is a fine specimen of the long-muscled type, as one must be to command the strength and quickness that form such a part of his game. He weighs 165 pounds and is five feet ten inches in height and his shoulders are more than usually broad for a man of his inches. Like all good athletes, he is temperamental, but his temperament is under good control. He wins a difficult stroke and smiles; he misses one or two and shakes his head as he walks back to take up the next ball, but beyond this he shows no traces of the thoughts in his mind.

As he takes up his position to serve he sets his feet, hunches up his shoulders as though to see that everything is clear, tenses his muscles and grips his racquet till his arm is like iron. High in the air goes the ball and as it falls he swings body and arm back and upward, meeting it with every pound of weight and strength, like a human spring uncoiled. On the court he has the quickness of the proverbial cat, but when the chance comes he springs on the ball with the ferocity of a tiger. He does not run after the ball, or to the net; he rather glides along the surface of the court; a characteristic so marked that some of the English papers devoted much space to the discussion of the "McLoughlin Glide."

Abroad he was the sensation of the year. The word best describes his play. He is sensational. Winning or losing there is not a dull moment when McLoughlin is playing. He does not attempt to win by the mistakes of his opponent, except those errors that are the result of some brilliant return of his own; some stroke on which his opponent can hardly get his racquet.

He has calculated his chances down to a fine point, and seems to know just when to take the ultimate chance, and his nerve or luck, or both, carry him through. At an important point in the second set in the finals at Newport where the loss of the game meant the set, he served a clean ace on his second service on the game point, risking the game on a long chance, and made it good. When England was within a point of winning

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the doubles, a win which would have meant the loss of the Davis Cup for America, he risked everything on a high smash from deep in the court and pulled it off to even the score; and afterwards served out the game.

Only once has his nerve been seen to tremble and that was last year in the semi-finals of the championship, when Wallace Johnson, by his peculiar "chop-shot" game, drove McLoughlin away from the net for the first three sets and came within an ace of beating him. But this was only a temporary lapse, for with everything against him, he took advantage of a few lucky strokes and, shaking off the nervousness that had held him in its grip, came back and hammered his way through the last set.

Being essentially a volleyer necessitates a keen judgment as to what balls will fall in—and therefore must be volleyed—and what balls will go out of court. Such judgment McLoughlin has to a very high degree. In his match with J. C. Parke in England it was commented on that only once in the entire five sets did he allow a ball to pass him which dropped in the court, and that by the narrowest margin.

His whole game may be expressed as the product of genius and painstaking effort. Tennis is his hobby and his delight and to succeed he has worked hard to develop the weaker parts of his game and to keep his whole physical structure in the finest state of efficiency. His game demands the most perfect muscular co-ordination and unlimited staying power, and these qualities he gains by a rigorous course of training throughout the tennis season. He neither smokes nor drinks, nor in any way takes chances that might detract from the perfect condition that is so necessary for the game as he plays it.

At the age of twenty-three he ranks almost on equal terms with the three greatest players in the world, Brooks, Wilding, and Parke, but, unlike them, he has many years to go before age will stop his further progress.

His one weak point has been shown and its dangers demonstrated to him in his recent defeats. With a year in which to concentrate his effort on the improvement of his backhand drive he may accomplish much, and should he come East next year as perfect in that particular as in the other ingredients of his game, there is more than a good chance that he will turn the tables on his conquerors of this year, and emerge from the fray the undisputed champion of the world in the game of Lawn Tennis.

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FOOTBALL COACHES—DRIVERS AND DIPLOMATS

By MACK WHELAN

ILLUSTRATED WITH PHOTOGRAPHS

WHAT makes the wheels go round? That's what we all want to know—in sport as in other things. Therefore we are keen to know something about the personality and method of the great football coaches. There's another reason. These men are not only the great repositories of football knowledge and experience; they are also, by reason of their contact with and influence over their men, of tremendous importance as character-shaping forces. It is doubtful if many of the professors have the power and opportunity for good or evil influence that come to the football coach.

IN proportion to the number of times their names are mentioned in the newspapers, football coaches are the most nebulous class of persons in America. It is as a spectacle that college football makes the appeal which has built stadiums. One of the first demands of an audience witnessing any variety of popular drama is that there be an element of mystery in the plot. And the public has seized upon the coach as the occult force in the drama of football. He is the character upon whom devolves the responsibility for certain happenings which would otherwise be incomprehensible. And as practically all his work is done off stage —out of the sight of the thousands in the crowded stands—he has come to be looked upon rather as a storehouse of technical information than as a flesh-and-blood individual.

Early in the fall the names of the men in charge of the elevens at the leading universities begin to make their annual appearance in print. Their initial publication is shy and apologetic. Pressure of other happenings in the world of outdoors keeps early season football news down to a minimum. For a fortnight after the deciding of that problem which transcends in importance elections, impeachment trials, and tariff duties the American public recuperates. Then the populace prepares for another session of athletic enthusiasm. Soon the compositors learn that it is Haughton, not Houghton, Sharpe, not Sharp. By the middle of November, with the stage set for the big games of the season, Camp, Yost, Jones, Williams, and Warner are household words throughout the land.

Just that and no more. As a general proposition, no man's family appellation becomes a household word in the United States unless the citizens have been informed of a number of details concerning him.

"Is he an emigrant or was he born on a farm?"

"Is he a bachelor? If not, how many times married?"

These and other important questions must be answered before most men can be admitted to the Order of Household Words. The knowledge serves to interpret celebrities to the public. It helps to keep them human beings. But football coaches are an exception. The season of playing is short. The fact that the teams fight to a finish on the field, with the head coach on the side lines,

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scarcely to be distinguished from a number of other individuals, keeps his personality in the background. Consequently for that large proportion of spectators who are attracted to football because of its spectacular qualities, the head coach is a mysterious individual, a cross between Sherlock Holmes and a professor in Advanced Geometry.

Few men have been keener students of the technique of football than the late Gordon Brown, whose untimely death two years ago was regretted by his host of friends throughout the country. Brown was captain of one of the most famous elevens ever produced at New Haven. In 1900 his team swept everything before it. Perusal of the scores registered against opponents will make many a Yale undergraduate of the present generation wistful. Dartmouth, West Point, Carlisle, and Princeton were overwhelmed, while Harvard was defeated 28—0.

PERCY HAUGHTON, HARVARD

"Old P. D.," who, when occasion demands, can imbue an All-American tackle with feelings of contrition for a misspent football career.

HOWARD JONES, YALE

One of football's "easy bosses" who teaches the game more by example than by precept.

After his graduation Brown continued his keen interest in the game of football, and his services on the coaching line were of inestimable value to the Blue. One fall, not long before his unexpected death, he was talking tactics with a promising young player. It was after the conclusion of the daily scrimmage, and the conversation harked back to the famous 1900 team.

"Who did your long-range kicking that year?" asked the younger man.

Brown thought for a fleeting second. Then he smiled cheerfully.

"We didn't need any kicker in those days," he said. "We just picked up the ball wherever it was and marched it down the field."

Changes in the football code which have since intervened have made an exact repetition of the policy of Gordon Brown's team impossible. He would have admitted that his characterization was not entirely accurate. Yet it represents the attitude of all sound students of the game toward mere trickery in playing tactics and is an indication of how inaccurate is the conception of a successful head coach as primarily a tactician.

It is doubtful if a single instance can be cited where mastery of the technical side of football of itself accounted for the success of a head coach handling a team of a caliber high enough to meet capable opponents. In other words, ab-

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GLENN WARNER, CARLISLE

As far as power over leaders of many tribes is concerned. one of the greatest Indian rulers in history.

solute command of all the strategy possible to the game is unavailing unless the individual possesses other and greater qualifications. Competition founded on the laws of physical contact cannot be won by strategy alone. The team must be grounded in the more important lessons of the game. The coach, first of all, must be an executive of the highest order.

He must possess such a combination of leadership and personal magnetism that he brings his eleven through the season without letting his interest in individual players affect to the slightest degree his judgment as to what is best for the team, and yet have each member of the squad feel not only that he is playing for the honor of his college and his own reputation, but under the especial obligation of vindicating the judgment of the coach who put him in the lineup. Methods vary, but without an exception it may be said that every one of the most successful group of football coaches possesses the faculty of arousing this feeling in the men working under them.

All great football coaches aim at the development of a team which shall possess the threefold virtues of basic soundness in the elementals, adequate technical resources, and harmony of action; but the manner in which they approach the task varies. Broadly speaking, they may be classed as either drivers or diplomats. Some attain success through maintaining absolute control over every detail of the fall campaign. Others reach the same end through the use of tact and moderation, and are so unassuming in their command that an outsider might be inclined to term their method lenient. This contrast cannot be more clearly indicated than by a survey of the season's situation at Cambridge and New Haven, respectively.

There is no coach who has been in the public eye for anything like a similar period whose coaching personality is so little known to the general public as that of Haughton of Harvard. Off the field Haughton has been described as a quiet and, save to his intimate friends, an extremely reserved individual. His tastes are artistic and the theater is his favorite amusement. On the field, however, Haughton ranks as one of the most exacting martinets in the game to-day.

"Haughton wins both ways," said a man who is closely in touch with the situation at Harvard upon being asked to sum up the underlying reasons for his success. "When it comes to culture, he can outculture the cultured. And when breathing the inelegant atmosphere of the football field he can convey instruction as concisely as anyone in the country."

Fairness is the keynote of Haughton's attitude toward his squad, and while in action the candidates expect from him a certain brusqueness. But Haughton's tastes are too artistic to permit him to adopt the flat-footed rudeness which some drivers maintain toward their team. Consciously or subconsciously, the opening of the football season at Cambridge resembles the start of a play —in sections of the country where the Belasco habit of substituting dimmed lights and gongs for the traditional orchestra has not yet been adopted. In other words, there is a football overture at Cambridge before the football drama

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starts. For the first two weeks of practice, Haughton has almost nothing to do with the team. He leaves the preliminary work entirely in the hands of the assistant coaches.

Columbus Day begins the real action. Very few States have honored the discoverer of America with an especial holiday, but Massachusetts is one. The holiday coming appropriately in October, at a point in the football campaign where the impossibles have been eliminated and a prospective first team selected, Haughton celebrates it by making his entrance. Up to that point the veterans in the cast have fallen into the habit of thinking themselves quite important and essential to the success of the production. When dusk settles over the stadium in the evening, everyone has come to the realization that any of the stage hands are apt to be found in the principal rôles before the run of the play is over.

Haughton is a shrewd observer of the limits to which a driving policy can be pushed. Throughout the season he leaves matters of administration entirely in the hands of assistant coaches—and he has enlisted the services of a corps of specialists who compare favorably with those available at most of the successful football centers in the country. Haughton watches and gives the results of his observation to his lieutenants. They handle all the routine. It is only at intervals and in emergencies that Haughton takes the entire administration upon his shoulders, but from the start of the season he rules the campaign with a rod of steel. Others connected with it, whether they be all-American material or ex-captains of Harvard elevens, find themselves abruptly checkmated if they either fail to carry out Haughton's instructions or introduce innovations of their own into the afternoon's workout without having first consulted the producer.

Howard Jones, who is responsible for the development of the Yale eleven this season, is a coach of a different type. He is naturally an unassertive person, but his control is effective, although he holds his authority in loose rein. While an undergraduate he had more than an average share of class honors. He was an exceptionally good end, never showy but always effective. He was popular socially. As at the majority of educational institutions, the last year at New Haven is accompanied by the compilation of varied class records. In the voting, Howard Jones received the nomination for the man least appreciated.

Syracuse produced what was probably the best team in the football history of that university under the direction of Jones as head coach. Yet when he first took charge of the team some of the athletic authorities thought they had made a mistake in selecting him. His methods were so undemonstrative that in the beginning they feared his administration would be ineffective.

A Syracuse player who made a reputation as one of the most brilliant back field men of the year in question, in giving an account of how this impression was dissipated, told to the writer an ex-

A. A. STAGG, CHICAGO

Who can be classed as a driver but whose methods off the field are distinctly those of the diplomat.

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F. H. YOST, MICHIGAN

A driver of a pronounced type who demands aggressiveness from his players or the alternative of leaving the squad.

perience which is of particular interest as an indication of how things are being conducted at New Haven this season. For the first few days after his arrival Jones merely watched the squad work out. Then he brought the coaching back to the simplest manner of play. In the practice scrimmages he ordered strict adherence to the primary rules of attack and defense.

At a time when the back referred to was playing quarter on the second team, the ball was advanced well up toward the 'varsity goal. Then the first team tightened up. It was last down, five yards to gain, and with the ball in a good position for a field goal. Jones had especially warned the candidates trying for quarterback against the risky type of play at that stage in the season, but the man in question, anxious to distinguish himself, called for a play through the line—and lost the ball on downs. He was allowed to run the team for a few more plays, then a substitute was sent out by Jones to take his place. Nothing was said about the error in tactics—but the player spent the next week on the side lines. He was not placed in a single lineup.

"I had just about concluded that Jones hadn't even noticed my mistake—he nodded pleasantly enough when we met on the campus—and that I had simply been dropped for general lack of effectiveness, when one afternoon after the first squad had gone in to dress I was called into active play. A varied assortment of scrubs were scrimmaging up at one end of the field. I heard Coach Jones call my name and, running up, found the quarterback position vacant. Upon asking for information they told me that it was last down, five yards to gain, and the ball in a good kicking position. You can rest assured that I lost no time in calling for the kick. The next day I was back again with the first squad, but I never forgot my lesson. The experience changed my mental attitude toward the game throughout the rest of my playing career."

Haughton is a driver. Jones belongs to the corps of football diplomats. The Cambridge coach, when need arises, uses the spurs freely and without disguise. Jones has a quiet way of letting it be known that he sees mistakes and the kind of personal influence which causes candidates to do their own worrying without having the seriousness of their deficiencies dwelt upon verbally. In one respect, however, the policy of the two coaches is identical. They have a common respect for football fundamentals, and neither will permit an eleven to achieve an undeserved early season victory at the price of drilling a firm foundation.

"We'll stick to barnyard football," is the answer which Haughton usually gives when plays of a complicated character are put before him. "That sort of

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thing is all right on paper, but it seldom works well against a first-class team."

"Barnyard football" is a phrase often heard around the coaching table at Harvard, and in one form or another the same idea is at the bottom of the coaching policy of all men whose names are associated with consistently good football.

Haughton's services to Harvard can scarcely be overestimated. He has inspired order, coherence, and unity of purpose, and the result has been of great value to his university. College presidents are not prone to admit that successful athletic teams are of value to the prestige of an institution. Certainly they are of no value if questionable methods are used to produce them. Yet, as regards the public, it is true that the spectacle of a great university, possessed of splendid material, unable to win important games over a long period of years, does result in a general feeling that there is something lacking in the atmosphere. Haughton has dissipated any illusions on this score as far as Harvard is concerned, and the effectiveness of his teams has been accompanied with as fine an ideal of sportsmanship and fair play as can be witnessed at any college. Football at Cambridge needs direction from some main source of authority to achieve the most effective results. Haughton is all that the phrase implies.

The situation at Yale and the policy which has been followed for many years is very different. There have been but few seasons when the success of a Blue team could be attributed definitely to any individual. Yale coaching is not the achievement of one individual. In its most adequate stage it is a partnership in which the dominating note varies according to the time and the especial need of the season. No institution has such a wealth of capable coaches as are available at New Haven. It is one college where the average of coaching opinion is apt to be right. Yale football history is a series of instances of coaches overlooking their own individual opinions for the good of the team.

The creation of the post of resident graduate coach marks a change in Yale football methods, but it will not result in the discarding of the New Haven

"BILL" JUNEAU, WISCONSIN

A coach whose remarkable combination of drive, tact, and tactics has made the University of Wisconsin a major football factor.

habit of making the eleven the product of a coaching partnership. In the opinion of the writer, Jones is an ideal selection for the task of fusing the fine material, traditional grit, and football wisdom available at his university into a team—and graduates hope, a succession of teams—which will be in line with traditional prestige. An absolutist, no matter how great his ability, would not fit into the scheme of things at Yale. Haughton and Jones differ in their method, but from the standpoint of their respective universities each is in the right place.

In any discussion where an attempt at arbitrary characterization is made there is a tendency to fall into machine classification. No post calls for more all-around executive ability than that of head coach. The majority of football drivers possess a goodly amount of tact

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to use upon occasion. And the recipe for being a good diplomat in football is the same as that prevailing in other fields—that the person shall possess influence which, through quiet domination, achieves results. Most of the football diplomats can drive upon occasion, but based upon whether or not their normal attitude toward the men under them is brusque or sympathetic, a dividing line does exist.

Anyone familiar with the methods of Glenn Warner, who guides the destinies of the players at Carlisle School, will admit that he is in the driving class. In the midst of a hard practice session he appears like a hard taskmaster for his Indian charges. Warner is a big man—he was one of the best players ever developed at Cornell—and he always keeps himself in condition good enough to be able to demonstrate a point himself.

From the start of a recent season, it was apparent that there was something wrong with the candidate at Carlisle who was best equipped physically for a certain position. He quickly mastered the theory of correctly handling his position, but in actual competition he couldn't put it into effect. Finally Warner came to the conclusion that the young man was simply dodging the issue—that his failure was one of courage rather than lack of football sense. That afternoon he donned playing uniform and took the opposing line position for the scrub eleven.

The battle of the tackles was the feature of the week's scrimmage. The Indian was forced to fight his hardest for sheer self-preservation. Finding himself still alive after several days of the program, he concluded that any player who could stand up against such an assault as had been inflicted upon him could afford to take the aggressive against anyone. For the rest of the season he was one of the main sources of Carlisle strength. The incident is typical of Warner's attitude toward his team. He critically surveys a candidate, makes a mental estimate of what his efficiency should be, and then proceeds to make him into the playing unit, supplying all essentials, even a fighting spirit, if that is needed.

The absolute discipline possible at Carlisle, which, being a Government school, enables the coach to keep his squad under observation at all times, is not attainable at most universities. George Brooke, who is coaching the University of Pennsylvania team this season, is a driver, but not to so pronounced an extent as Warner. Steihm, of the University of Nebraska; Graves, who coached West Point for two years; Yost of Michigan, Edwards of Princeton, Stagg of Chicago, McGuigan of Vanderbilt, Cavanaugh of Dartmouth, and J. W. Beacham, U.S.A., employ methods which in a general way put them in the driving class.

FRED DALY, WILLIAMS

Available material considered, one of the most successful coaches of the tactful school.

E. N. Robinson, who has produced some remarkable football elevens for Brown University, is a man of the other school. He has an especial faculty for taking varied material and developing it into a unified team. He rarely censures a player for a mistake or publicly takes him to task for deficiencies. His attitude is more that of a partner in football enterprise than a commander-in-chief. Cornell is trusting her football destiny to Dr. A. H. Sharpe, another coach who seldom uses the whip. Cornell's need in the past has not been for a driver. They have had many of this type at Ithaca, but events have proved that

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the eleven was lacking in reliable working parts. It isn't any feather in the cap of an automobile manufacturer to put out a machine able to travel fast if at a crucial moment the vehicle may fall into disconnected pieces. For the general good of college football competition, nothing is to be more desired than a successful Cornell eleven, and close students of the game believe that Sharpe's patient building up will bring results.

BLUETHENTHAL, PRINCETON
A 1912 player who is stepping from center rush to coach in a season.

H. L. Williams, who has made Minnesota a constant quantity in football competition, is a man of the diplomat type. He is an ideal coach for bringing a team through the season and registering even progress in playing efficiency. He does not possess in great measure the power of keying an eleven to a tension which makes them formidable for the most important engagements of the season, but Minnesota is cared for in this respect by another coach. Williams is distinctly the man of new ideas.

The West does afford a splendid example of a coach who attains a happy medium between forcing his men too hard and not forcing them hard enough. W. J. Juneau, who is responsible for the splendid record of the University of Wisconsin, is counted as one of the best-balanced coaches in football. A great end in his own playing day, his coaching is of the type which leaves no room for question as to who is in charge when he is on the field, but his manner is not marked by unnecessary brusqueness. He ranks high as a tactician. His formula for smashing plays on and off the tackles accounted in large measure for the success of Wisconsin in its section a year ago. Yet he is not committed to his own particular school of football thought and he is always receptive of criticism—even of his own pet plays.

For a man who combines maximum driving power with a most exhaustive knowledge of the theory of football, George Foster Sanford, who, early this season, coached the Rutgers College team, is in a class by himself.

There are many who think that Sanford is the greatest lineman ever produced at Yale. He is a man of such great physical capacity that he would be formidable even without much tactical wisdom. It is a long time since he represented his college in athletics, but he could give all-American material a stiff argument in competition even now. Since he was active, there have been many changes in the rules, but good coaches are still holding to theories and formulas which he laid down. Football is a study of never-failing interest to him, and he possesses the personal magnetism to carry his tactics from paper into an eleven and over an opponent's goal line. Considered from the standpoint of effectiveness, Sanford has few rivals.

Bill Reid, head coach at Harvard before Haughton, is another man of the driving type, and one who similarly has not received the general appreciation which is probably his due. Reid took hold of affairs at Cambridge after a long period of disorganization. His task was a difficult one. He produced creditable teams, and while Yale was not defeated during his régime, there are some critics who think that Haughton was enabled to gain the quick success he did because Reid had laid the foundation for it. Charles Dudley Daly, lately restored to

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the Army and now coaching West Point, is another Harvard driver, but not of so pronounced a type as Reid.

Speaking of the forcefulness of football advisers and the belief engendered by reading football fiction and a play which was popular some seasons back in which the "big" scene was a harangue by the head coach which made the rafters ring, it might be said that the atmosphere of the locker-room between the halves is much more subtle than might be imagined. In the last two Yale games, for instance, Haughton had but little to say to the Harvard team. Two years ago, when Harvard was confident of winning and had failed to realize her ambition, all he had to say was:

"Pretty disappointing, men. You'll have to do better next half."

Then he plunged into a discussion of the technical faults revealed, describing how and where the Harvard attack was being frustrated, and closed with a few crisp sentences. His policy was the result of close study of human nature. In the earlier games of the season he had regularly used the half-time recess for merciless criticism of individual and team defects. For the climax of the schedule he calculated that it would be more effective to dispense with the custom.

Mike Murphy, who knew human nature first of all and something of all other subjects afterward, was a close student of football, and his especial care was to provide an inspiration for Pennsylvania elevens. During most of his years of service at Philadelphia, he was in a weakened state physically, but serious as was his condition he did not hesitate to use it as a means of putting the winning spirit into Pennsylvania teams which seemed beaten at the end of the first half.

After the tacticians had done their best to show the Penn players the error of their way, and with but a moment remaining before the expiration of the recess period, the door would be opened and there, leaning upon the shoulders of a couple of substitutes, would be Murphy, pale and weak, but with fire in his blue eyes.

"Brace up, boys!" he would whisper. "Brace up. Remember the old man is pretty weak to-day. Probably it will be the last time he'll see you play. Let him see a winner."

No wonder Pennsylvania teams had a remarkable recuperative power which puzzled visiting coaches when their elevens met entirely different teams in the second half. Murphy was held in respect and affection by all Pennsylvanians. His reputation was international and his death left vacant a place which will be hard to fill.

Some of the most interesting successes in football do not attain a great degree of publicity. Fred Daly, who is coaching Williams for the third season, has accomplished remarkable results, but beyond the ranks of close football students his name is not widely known. When the potential value of the material he has had available is considered, the record of the Williams's teams he has coached is remarkably good. He is one of the most effective of the quiet school of coaches. He has given Williams a football system and kept the institution up in the forefront of football efficiency among colleges of similar size.

The Place for Youth

It is easier for a young coach to go to a small institution without football traditions and build up a good system than for a man of the same age to successfully head the fall campaign of an old and famous university. For this reason the success achieved by Logan Cunningham at Princeton is especially remarkable. He was in charge of the team last season and in 1911. He came right up from the ranks of active players and handled the situation at Princeton with notable success. In 1911 Princeton won the intercollegiate title in the East and last year, although the scores were not so flattering, I think that his team was one of the best ever produced by the New Jersey college. Cunningham is a born coach.

The aspect of affairs at Princeton this fall is particularly interesting because that university is practically the only one holding an unquestionable place in the history of the game where an experi-

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ment once common, but now pretty generally discarded, is being tested. It is human nature to conclude that because a man can do a given thing surpassingly well himself he can teach others to do likewise. It is not necessary to confine attention to the fall game of the colleges to declare this a fallacy. The abandonment by Yale of the policy of asking the captain or the best player of a team to assume the responsibilities of head coach the following season is significant of the spreading conviction that knowledge of the game is not the main asset of a competent administrator. Putting a young player in charge is always an experiment and experiments are dangerous in football, which is one reason why the list of great coaches changes slowly. When the right man is found strong pressure is exerted to have him continue in authority.

Instead of returning to Princeton again this fall, Cunningham preferred to let football alone and get down to serious work in life. The athletic authorities then selected Bluethenthal, a fine center and a great factor in Princeton's line play for the past two seasons, and H. G. Andrews, end on the 1912 team, to assume executive control. They are working hard for success, but it looks as though they would have a hard time duplicating the success of Cunningham, who was exceptionally equipped for the work.

As a general proposition, it may be set down that it takes experience and exhaustive study to develop a coach capable of successfully entering the ranks of men in charge of the first-class teams. The fact that Walter Camp has been a close follower of the game since its inception has given him a store of football knowledge which has made his name inseparably connected with football in this country. From time to time an iconoclast rises up who says that Camp's reputation is greater than he deserves, but these critics show a lack of familiarity with both Camp and the history of football. He never was a driver and it is years since he has attempted to inculcate his principles of play into Yale players through individual instruction in practise. As a tactician, however, he has

TOM SHEVLIN, YALE

Phenomenal player and irresistible football enthusiast whose dynamic energy has accomplished football miracles.

rendered invaluable service to Yale in the past and will continue to do so in the future.

A diplomat who has developed some interesting principles of play, but who has remained an unknown for the great mass of football enthusiasts, is Coach Ayrault, who has been in charge of football at Groton School. He has united football and psychology to a degree which has attracted attention from such authorities as Haughton and Camp. Ayrault has been working on the theory that to surprise an opponent is to render him half beaten, and his strategy has not been confined to team play, but has been applied to the handling of individual posi-

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tions. One play of the Ayrault school will serve to outline the general proposition.

A team gets within striking distance of the enemy's goal line. It is the last down, with considerable distance to gain. The play is through right tackle. The offensive line, instead of attempting to stop the opposing tackle, whose elimination is necessary to the success of the play, permits him to tear through. The latter thinks he has a clear field and is plunging to break up the onrush of the backs when the offensive left end crashes into him from the side and spills him out of the play. The theory is that with the element of surprise on his side the end will be capable of disposing of the oncoming lineman and perhaps be of further service to the attack. In any event, the left end is the least useful man on such a formation, so that if he gets his man and leaves the right side of his line free to open up a hole for the back carrying the ball, a big advantage is gained.

The main trouble with drilling a team in this kind of play, specialized for a particular situation, is that it burdens an eleven with a great deal of responsibility which can only give results upon particular occasions. Yet strategy of this kind, mastered and reserved for the telling moment, might mean the margin between a tie game and a hard-won victory.

Brown of Harvard

For an extreme type of strategist who has never appeared in the rôle of directing coach, but whose services have in their way been as valuable to Harvard as Camp's have been to Yale, the case of Reggie Brown can be cited. Brown has been following the course of play at Yale for years. Although one of the most loyal men connected with Harvard football, he rarely sees any game in which Harvard is a participant save the annual contest with Yale. He lives and works in Boston, but during the football season he commutes to New Haven and in the course of his pilgrimages has come to know more of football methods there than the average Yale coach—knowledge which is extremely useful at Cambridge.

Some Yale men who know him well admit his ability to tell what the Blue team is going to do a play ahead during the greater part of the annual game with Princeton. The Yale coaches endeavor to keep some surprises covered up and particularly reserved for Harvard, but some competent critics say that, thanks to the pleasant Mr. Brown, who smiles at the world in general and the Yale team in particular from the vantage-point of the press stand at New Haven, the Crimson has for four years past had time and opportunity to drill the defense against everything that Yale has produced, including the Minnesota shift. Brown is an extreme type of the quiet school and would be of little use in drilling his knowledge into a team, but there are contrasts both ways across the ranks of football coaches. Speaking of the play which came out of the West to New Haven shifts the discussion to another person who is at the opposite pole of the football hemisphere—Tom Shevlin.

The success of the University of Minnesota in Western football over a number of years, and the reprieve which Yale secured from what looked like a disastrous defeat at the hands of Princeton three years ago was due to the work of the firm of Williams and Shevlin. H. L. Williams is one of the great technical students of football, a genius at inventing new modes of attack. The Minnesota shift is the development with which his name is most generally connected, but he has originated a number of other ideas which have been quite as generally adopted. His head work in conjunction with Tom Shevlin's driving power has brought about football miracles.

In 1910, after Yale had gone through a disastrous preliminary season culminating with a 21—0 defeat registered by Brown, Shevlin came to the rescue from his home in Minneapolis. Among other football ideas, he carried the Williams message on the first of the modern jump plays—the Minnesota shift. The combination turned the tide. Shevlin took complete charge of affairs at Yale Field. The gates were closed. Just what happened has never been given out for literary use, but a week later Yale defeated

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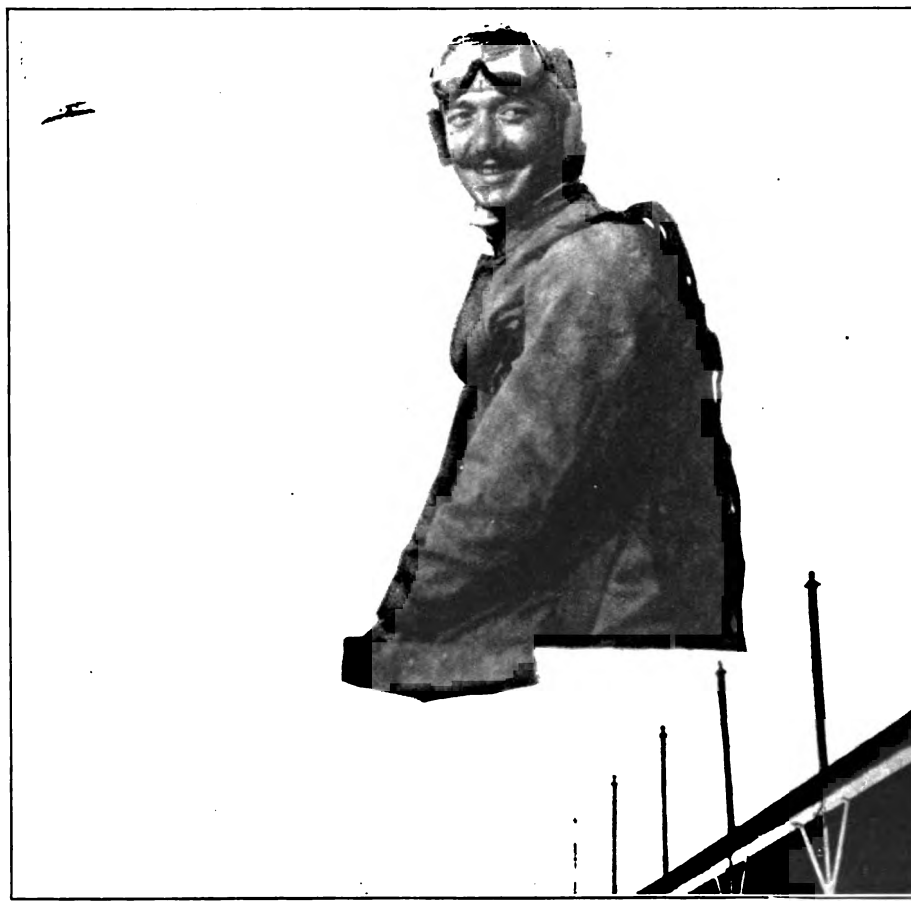
a confident Princeton team which had made an enviable preliminary record.

When the discussion of a proper selection to fill the post of resident head coach at New Haven first started it was seriously suggested by outsiders that Shevlin, the man who had saved a lost cause, would be the right man for the post. Shevlin didn't want the post and could not have taken it on account of his business responsibilities. But even were these obstacles overcome, he would have been the last man in the world to regulate the destinies of an eleven for a full season.

Physically Shevlin is a superman. He has an inexhaustible supply of nervous energy. He knows football. He inspires enthusiasm. However, there are limits to the availability of a genius, and Shevlin will not make a good head coach for a ten-week season until such time as the race produces a hardier set of young men. He is a dynamic force too powerful for continuous contact with a team made up of ordinary human beings. In the midst of his enthusiasm for football and Yale he forgets that the race only produces one Shevlin in a football generation.



Photograph by Underwood & Underwood.

AN AVIATOR WHO LOOPS THE LOOP

This is a photograph of Pegoud, the French aviator, who has accomplished the feat of turning a complete somersault in the air in a monoplane. He drives the machine headlong toward the earth and then manipulates his planes in such a manner as to turn it upside down, completing the evolution by bringing it on around to a correct position. In the photograph above he is shown in the upper lefthand corner of the plate flying upside down. The landing wheels can be seen in the air above the planes.

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Photo by Underwood & Underwood.

OUIMET, THE NEW OPEN GOLF CHAMPION

Playing through the strongest field that has ever been gathered together on this side of the Atlantic, Francis Ouimet, a twenty-year-old amateur from Woodland, Mass., won the open golf championship at Brookline, September 20. This is the first time that the professionals have seen this prize pass out of their hands in this country. To make it more complete, Mr. Ouimet met Vardon and Ray, two of England's greatest pros, in a three-cornered tie at the finish and beat them with room to spare. His average score for the seven rounds played during the week was 73 3/7, the last being played in 72, one under par. Mr. Ouimet has been practically an unknown until this year. In the National Amateur he led in the first qualifying round being beaten by Mr. Evans on the second day. In match play he lost to Mr. Travers. His only victory of importance hitherto was the Massachusetts state championship.

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CAMPING IN A LABRADOR SNOW-HOLE

By CLARENCE BIRDSEYE

ILLUSTRATED WITH PHOTOGRAPHS

A Forty-eight Hour Fight for Warmth with the Mercury at Thirty Below

LEAVING Rigolet, the main post of the Hudson's Bay Company in Labrador, on the morning of Monday, January 27, 1913, we pushed west in a steady fall of snow, with a light wind almost at our backs and the thermometer not much below zero. At noon we reached the Eskimo settlement of Karawalo, where we had a cup of tea and stewed seal meat at Tom Paliser's house. Tom was one of the Eskimos who visited the Chicago Exposition in 1893, and it was a treat to talk of New York, San Francisco, and Chicago with him.

After resting the dogs for a couple of hours, we left Karawalo and were soon heading south across the ice of Hamilton Inlet for Pease Cove. It was snowing harder by then, making it impossible to see the opposite shore, so we got out our chart and steered across by the little compass strapped to my wrist. The dogs were strung out in perfect order and Will Martin, my driver, had no trouble in keeping them on the course until finally the south shore of the Inlet loomed ahead.

Skirting a gaunt, granite bluff for a couple of miles, we took the path up over the portage, crossed the frozen marsh on the summit of the ridge, and plunged into the thick woods beyond, to come out suddenly into Billy Wolfrey's clearing. Here our dogs became hopelessly tangled with a smaller team bound in the opposite direction, and while Will and old Billy fought to separate the snarling mass I carried in the "komatik box" which held our grub. As food was rather scarce at Billy's, we took out some rice and raisins and soon had a pudding for all hands boiling merrily.

WE WORE WATERPROOF SEALSKIN SUITS

Over our evening pipes we swapped yarns and discussed Billy's proposed shift north into better trapping grounds until about eight-thirty, when he and his wife and daughter crawled back into the lean-to shed containing the household's one bed. Will and I spread a couple of caribou skins on the floor, unrolled our sleeping-bags on them, "drew some shavings" for kindling, and placed good dry sticks handy for use if the room should get too cold during the night. Then we took off our moccasins and coats, blew out the light, and crawled in. That night the snow stopped, the wind shifted

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to the northwest and swept the snow into deep drifts, but moderated toward morning.

Breakfast—salt codfish, bread and molasses and tea—was over by six o'clock, and as the weather on the whole looked promising we decided to push on for Flat Water, forty-two miles away, where our next grub depot lay. The first thirty miles of the route lay along the west side of Back Bay, a long, narrow fiordlike arm of Hamilton Inlet running south between high, rocky hills. This bay forms a perfect funnel in a northwest gale, and has the reputation of being the nastiest, driftiest place in Labrador, but although neither Will nor I had been over it before, we were pressed for time and decided to take a chance on the weather holding good.

Into the Blizzard

Followed by the hearty farewells of Bill's little family, we left the comparative shelter of his clearing and started up the Bay, to find the wind blowing harder than we had thought and the snow drifting badly. Still, the tops of the high hills were visible most of the time, and we anticipated no difficulty in keeping a course along the shore. Here again we were wrong, for we had made little progress when the wind and drift grew worse, the sun faded out behind a thick gray wash of cloud and by the time we had made Whaleboat Point, six miles out, it was rarely that we could count our dogs in the gathering gloom.

Drifting before the growing storm, we came to the windward side of a long point, and in attempting to skirt it the dogs, blown along at full gallop, several times took us up over jagged spurs, tumbling komatik and all over the ledges beyond. The wind had risen constantly until it was a shrieking gale and dogs and rocks and hills had faded out in the driving smother. Once we were swept among the scattered bushes of a projecting point and it took what seemed an eternity of heart-breaking struggle to free the fear-maddened dogs. The traces clear at last, we raced on again for some distance over the level and then plunged forward up an invisible slope, to come to a sudden stop, accentuated by the doubled fury of the gale the moment we ceased to drift before it.

Turning the komatik bottom up to anchor it, Will groped his way forward to investigate and found that the dogs had disappeared over a precipice, some of them hanging in the air by their traces, which varied in length from ten to sixty feet. Will slid down and as I slipped the traces loose from above he tied the dogs to bushes. Then, guided by my shouts, he crawled back to the komatik, which we were able to work down to the dogs by a roundabout way. All this, remember, with the wind blowing so hard one could scarcely stand, the smothering drift so thick a man was invisible ten yards off, the temperature thirty degrees below zero, our eyes blinded, and our faces covered with ice.

In the lee of the cliff the force of the gale was somewhat broken and we were able at last to get our team "buttoned in," although the dogs, half-frozen, shaken up, and thoroughly frightened, were in no mood to go forward. For an hour as we sat huddled with bent heads we could see nothing in the white swirl beyond the nose of the komatik. Suddenly the pace slackened, the drift grew slightly thinner, and we found ourselves in the edge of a patch of low, sparse woods on a lee shore.

Fearing that even if we should be able to disentangle the dogs again and go on it would only be to get hopelessly smashed up on some barren and exposed point where, if the gale continued, the lack of shelter would mean inevitable freezing, we worked our way a little farther in among the scattered, stunted trees, unharnessed the dogs, and set to work to build a shelter. This we did by making a bough shed in the lee of two green spruces, unloading the komatik and bracing it against the leeward side of our crude shelter as a prop against the force of the gale. After a hasty attack on the lunch of cocoa and fried partridge we had brought with us—and never was a meal more welcome—we spent the remainder of the afternoon cutting firewood for the bitter night ahead.

At dark we started our fire on a dou-

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MY TEAM. A LIVE SILVER FOX IN THE REAR BOX

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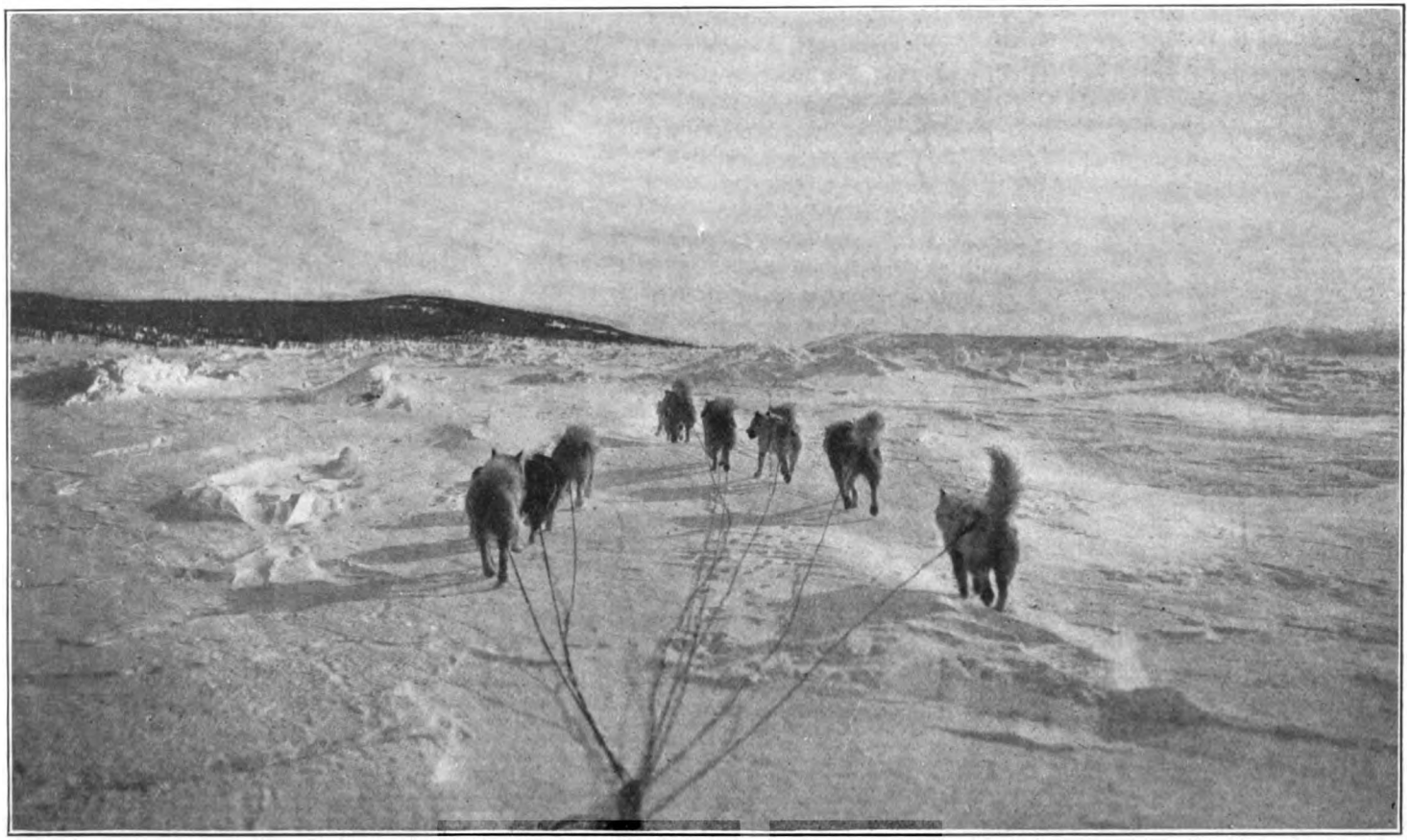

MY TEAM DOING BUSINESS IN A TYPICAL MANNER

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ble foundation of green sticks placed on the snow. Soon the coals ate through this base and the fire commenced to sink out of sight. Then, with our axe and snowshoes as shovels, we followed that fire down through ten feet of wind-packed snow, taking out large blocks and using them to make the windward side of the shelter more drift-proof. This task kept us well occupied and the first night passed quickly.

When finally daylight came—and the world seemed only less dark than before when our watches showed that it had come—the wind had increased and the snow was falling and drifting worse than ever, though that had seemed impossible the day before. Remember, we were in the comparative shelter of scattered woods, yet our "camp" was invisible ten steps away and a man disappeared at the same distance.

Before dawn on Wednesday our firewood was exhausted and we spent all that day cutting a supply for the coming night. It was cruel work after a sleepless night, for dead trees were scarce and we had only one dull, light axe. Our mitts were soaking wet and froze around the axe helve as soon as we left the fire, and, although we dared not venture more than fifty steps away, one man had to remain behind to call and guide the other back to camp. When night closed in again, however, we had enough wood to keep the fire going. We had sufficient rice, prunes, raisins, candy (which I always carried for the kids) and tea to keep us alive for three days, with twenty pounds of dog feed and nine dogs to fall back on as a last resort, but we allowed very small rations, because there was no telling how long we would be stuck. Then, again, we carried no kettle, for our Thermos bottle had always furnished us with a hot noon drink. Luckily, however, we had a pound sugar tin and by putting a wire handle in that we were able to boil tea and even to cook rice and prunes.

Do you know how cold —30 is, with the wind a gale and the world asmoke with driving, stinging snow? Well, it was at least that cold outside, and inside it was so cold that while we burned our palms over the big log fire the frost gathered white on the backs—so cold that even though we scorched our mitts over the fire we could not thaw both sides at once; so cold our deerskin moccasins and leggings froze so stiff we could not bend our ankles, though our feet remained dry and warm; so cold our outside clothes froze as hard as boards and rattled when we walked.

Not the least serious of our dangers was the smoke. In such a shelter it swirls around and around, filling every nook and corner before it finally escapes. By Wednesday evening Will was smoke-blind, unable to open his eyes inside the shelter at all, although he could see well enough outside to cut up a little wood. This made it necessary for me to keep the fire going, our can boiling, and the drift snow shoveled out. Soon my eyes got worse and long before daylight I had to leave the shelter and remain outside in order to save them for traveling.

In Armor of Ice

Although we had warm sealskin sleeping-bags, we did not use them, for our clothes were covered with ice, which, on melting, would soon have soaked us through and meant inevitable freezing on facing the cold again. So we preserved the bags against the time when smoke-blindness and lack of wood should force us to use them. During these two days and nights we got no sleep—it was too cold. Several times while warming himself Will did doze off and topple forward half into the fire. We had a fine big caribou skin and that we used to sit on.

Often as I stood outside and looked down through the smoke eddying out of the opening and saw Will kneeling in the red glow of the fire way below I thought of Dante's Inferno as it is popularly represented, and on coming back from woodcutting with my sealskin clothes rattling like sheet-iron the jesting advice of a friend to think of him picking oranges from the balcony down in Old Mexico recurred to me with startling contrast.

Up to three o'clock Thursday morning the storm showed no sign of abating and we grew bluer and bluer. Then

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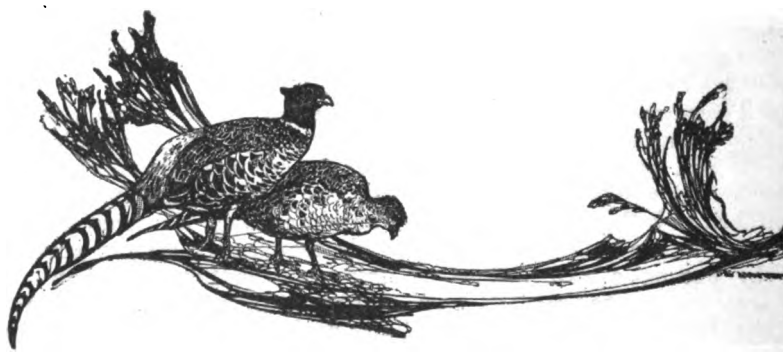
the moon broke through, the wind began to drop and with it the drift, so that soon we could make out trees at some distance. In the hope that the morning would be clearer we commenced long before dawn to get ready to leave.

Our deerskin moccasins and many pairs of woolen vamps and knit sox, which had kept our feet dry and fairly warm, though frozen solid enough on the outside, had not been wet through until this time, but in stumbling around near the fire we slipped in the mushy snow and before long our feet were soaking. That meant frozen feet unless we could make a change, so we got out our sealskin boots and wrapped our feet in some pieces of arctic hareskin I happened to have along, using more of the same in our wet mitts. Then we took up the gruelling work of digging our outfit out from under snow drifted around the shelter, loading the komatik, and harnessing the dogs. The wind was still strong and gusty and we frequently had to stop to thaw out over the fire. Daylight came as we completed our preparations and showed us clear across on the northern side of the Bay, in the only bit of scattered woods on an otherwise barren shore that could have afforded us the shelter necessary to prevent death from freezing during those forty-eight hours in the snow.

Starting with the rising sun, we worked our way by eleven o'clock to Back Bay and its two houses, as welcome to our tired eyes as any oasis in a desert. Those two shacks meant warmth and sleep and more we did not ask.

WHAT'S THE FUN IN TRAP SHOOTING? That's a question all of us have asked at various times. Percy M. Cushing has found the answer and gives it in the December OUTING.



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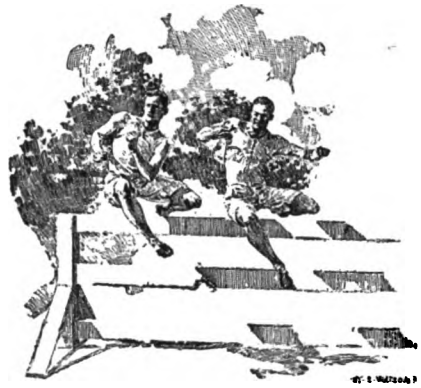

KOLEHMAINEN THE FASTEST OF THEM ALL

By LAURI PIKHALA
University of Helsingfors

An Estimate of Hannes and His Brothers by a Friend and Team Mate at Stockholm

THE sensation of recent years on the cinder track, as well as in cross-country, both in America and abroad, has been the running of Hannes Kolehmainen, and to only a somewhat lesser degree of his three brothers. In running, as in other things, very few things happen without reason, and in the case of the Kolehmainens there are four good reasons. Applying specifically to Hannes they are: Inherited ability; national Finnish customs and sports of long standing; the general athletic boom in Finland in recent years, and the work and teaching of his brother William and of his friend, trainer, and masseur, Yrjo Koivistoinen.

There have been great athletic families before, the Donovans, the Davises, Murrays, Grants, Adamses, Craigs, and Wendells, but never a family like the Kolehmainens. The eldest of the four brothers, Tatu (Davy), twenty-eight years old, is a prominent distance and Marathon runner, holding the Finnish Marathon record inside two and a half hours. He won his heat of the 10,000 meters at Stockholm, but was put out of the Marathon by the intense heat that disposed of more than one other contestant. William, twenty-six years of age, is probably the fastest distance runner among professionals in the world. The third brother is Hannes (Johnny), best known in America of all the brothers and holder of the five-mile outdoor and three-mile indoor world's records. Last of all is Kalle (Charley), nineteen years of age, who gives promise of equalling his famous elders. Mention should not be omitted of Maiji (Mary), the sister, who is a prominent lady ski runner.

A question often asked is, which of the brothers is the fastest? The case reminds one of the three famous tailors. One advertised that he was the best in the world; the second that he was the best in the town; the third that he was the best in the street. William contents himself with the claim that he is the best

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runner of the Kolehmainen family. To find a family so uniformly skilled in sport goes far to convince one of the value of hereditary bent. Also one must not forget what is due to Sophie Kolehmainen, the mother, who took to the washtub to support her family on the death of her husband nearly a score of years ago. If the Countess of Versall deserved a medal because her six sons did something—no one quite knows what—at Stockholm, this Finnish washerwoman deserves praise at least for what her sons did.

On the practical side, first credit must be given to ski-running for the development of the Kolehmainens. This sport is to Finland what baseball is to America. In the first races they entered each of the three elder brothers won his event. This fired their athletic ambition and they began to train in earnest. Though Hannes, the younger of the three, was only sixteen, they managed to do an astonishing amount of practice. Every night they would go out on runs of from ten to fifteen miles at as hard a pace as they could set. As a result most of the races they entered were easy in comparison with these practice runs. On Sundays and holidays they would treat themselves to extra jaunts of fifty or sixty, sometimes as high as eighty, miles, always finishing with a burst of whirlwind speed.

Ski-Running to Running

Despite the apparently tremendous exertion of ski-running, the result of these trips was never anything but beneficial, developing all parts of the body evenly. This sport lacks the exhausting quality of bicycling, skating, or ordinary running. Ski-running builds up its man; it does not tear him down.

From ski-running to running was the next step, but it was taken purely as an adjunct to the ski. One day it occurred to Hannes that one way to improve his form on the ski might be by road running, particularly as it would enable him to keep in shape during the summer. It was seven years ago that the Kolehmainens took up running as a means of bridging over the dreary Finnish summer. But faithfully as they trained, the boys were unable to reach the rank of real champions on the ski. By 1909 Tatu and William probably belonged among the first eight or ten and Hannes among the first fifteen ski-runners of the kingdom, but that was not enough. They had tasted ambition and could not brook seeing anyone above them.

It was in 1909, then, having moved from their native town to Helsingfors, that they took up running as a major sport and went in for racing in earnest. The Marathon was the favorite event of all three, and Tatu and William gave a good account of themselves. Hannes, however, was not so successful, probably on account of his youth. In fact, in the fall of that year he was informed by the doctor that he had a weak heart. Consequently, he began to give his attention to shorter distances. Here again he was slow in rounding into form. In a 5,000-meter race which he entered that first year the best he could do was fourth, exactly a minute behind the winner, E. R. Voigt, Olympic five-mile champion of 1908. The man who finished third in this race was also third in the 10,000 meters at Stockholm in 1912, which was won by Hannes.

Late in the fall Hannes began to show improvement, even in the Marathon at which he had previously failed, and covered the 25 miles in 2 hours 40 minutes. His brother William was four minutes ahead of him at the finish. It was during the winter of that year that William sailed for America. It was his intention to remain an amateur, but conditions in his trade, brick-laying, were so bad that he turned professional for the sake of his bread and butter. This seems a mistake at first glance, but it is probable that the greater time and opportunity which this change gave him for the study of form and method redounded greatly to the improvement of Hannes, to whom William promptly relayed the first bit of information he could pick up. Thus William has been the designing architect in the training of Hannes.

But there is another man who deserves all the honors of constructing engineer in that work. That is the boyhood playmate and friend of the boys, Yrjo Koivistoinen, a young man of the same

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age as William. Apprenticed as a railroad engineer, he made up his mind in the autumn of 1910 to sacrifice his career for his friends, moved to Helsingfors, took lodgings in the same simple room with Tatu and Hannes, and was registered as a student in the Finnish National Institute of Massage. All day long he was busy in the Institute and his evenings he devoted to the brothers. In addition to his work as masseur with the brothers, he designed the gymnastic exercises that have played no small part in their development. This same fall Hannes ran the five miles in 25 minutes 22 seconds. By the aid of the coaching of his brothers and the treatment of the young masseur, in 1911 he won the English four-mile championship in easy fashion, and in the fall of the same year did the 3,000 meters in 8:48½, seventeen seconds faster than he had traveled in an international race on a better track a year before. In the 2,000 meters the same year he cut his time from 6:2 down to 5:40. From that time on Hannes's improvement was steady and rapid down to his success at Stockholm and his more recent performances in America.

A question often asked is as to the methods used by these brothers in their training. A final answer is hardly possible, especially as the more famous Kolehmainens, Hannes and William, hardly furnish a sufficiently broad basis for generalizations. Some criticism has been aimed at the system of massage practised in Finland as being too severe. One argument cited is Mr. Koivistoinen's refusal to treat George Bonhag, on the ground that it might be harmful. This really proves only that what is one man's meat may be another man's poison. The amount and severity of the massage which a man may safely receive depends to a considerable extent on the amount of running that he is doing. Hannes trained hard and required correspondingly severe massage. I believe that if he had competed only in the 10,000-meter run and the cross-country at Stockholm, with a full week's rest between, the amount of physical massage he received would have been injurious to him. I speak of "physical" massage, for in my opinion the ill-smelling rubdown I have seen used in America is important largely for purposes of mental suggestion. The gestures of the rubber and the smell of the liquid intensify the athlete's faith in his ability and fitness and that means half the victory.

Under the Finnish system the massage is intended to reach not only the superficial muscles, but also those deep-seated ones that are of still greater importance. The actual suffering under it is in inverse ratio to the amount of work that a man has done.

Another piece of torture that has been criticized by Americans is the steam bath. Apparently some of the critics had the idea that this had been invented by Hannes's trainer for the benefit of the Kolehmainens alone. On the contrary, it is a national Finnish institution which has been followed throughout all parts of the country for centuries. Even the smallest farmhouses have their bathhouse (*sauna* as they call it), and all the family, old and young, strong and weak, men, women, children, and even babies, take their steam bath at least once a week throughout the year.

One Lapse No Argument

The fact that Hannes went off form after the Olympics has been cited as proof of the over-severity of his methods. Then Ted Meredith also uses over-severe methods, for he also lost his form and ran badly. And curiously enough, both men came back at about the same time. The truth was, of course, that both had overstrained their nerve systems, which no system of massage can wholly prevent.

As to diet, Hannes is a strict vegetarian. Yet I think that it is rather the simplicity of his menu than the absence of meat that has helped him. He simply employs his stomach to do the work that many people leave to the care of their cooks. He eats plain, often uncooked, food and avoids over-eating.

One danger to which Hannes is subjecting himself in his recent running is that of stiffening from indoor work. I do not think there is any more effective means of halting a man's improvement than by running on a hard floor. Im-

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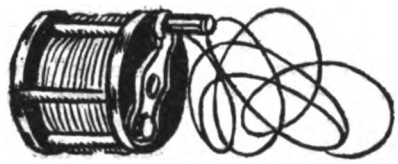
agine what horsemen would think of a trainer who trained a trotting horse on hard city pavements. The best thing that he could have done after the games at Stockholm would have been to give himself a complete rest of four or five months and then resume his training in the usual way out of doors. As it is, it is still an open question whether he can keep up his improvement under American conditions.

On one or two occasions his amateur standing has been called in question. He is in receipt of money, but it is from his brother and no one else. It is a little difficult to see how this differs in principle from receiving money from one's father or anyone else on whom one happens to be dependent. As a matter of fact it is hard for a good runner to preserve the appearance of strict amateurism in the United States. If he runs only seldom he is believed to drive too hard bargains with the managers of the meets. If he runs often he is supposed to be too keen for profit. If I were registered under the A. A. U., I should apply occasionally for suspension in order that I might rest without arousing suspicion. It would not be a bad idea to create a special class of voluntary suspensions granted on the request of the athlete for his own protection.



ALL FOR A FISH-HOOK

By WALTER H. MAIN

Being a Veracious Account of a Lost Trout Stream and a Strange Guide

WHEN you've been in camp ten days and never caught a thing except a few suckers and sunfish, when your grub is almost gone and you are getting hungry and peevish, when you begin to doubt if you ever caught a real fish and wonder if there are any more fish in the world worth catching—when you get in that frame of mind you'll be ready to follow any stranger who comes along into the trackless forest if he will promise you fish.

That was just the state of our camp that August morning. Pete was peeving in the shack, thinking about breaking up housekeeping and starting home. I was washing the boat. Not that the boat needed washing, but there didn't seem to be any use going fishing and I'd rather wash the boat than listen to Pete swear, and I had to do something.

I don't know where he came from, the uncouth figure who smashed through the underbrush back of our camp and broke the silence that was brooding, ominous like, about our shack with his "Wall, stranger, how they runnin'?"

"If you mean the fishing," I replied sententiously, "there ain't any."

I was glum; I didn't want to be disturbed by any loquacious tramps, and I went on washing my boat.

The unkempt individual squatted on the ground and lighted his pipe. He said no more, from which I gathered he was a guide, a real woodsman. Now, there are guides and guides. Some are good and some aren't worth their salt. However, they all have one point in common: Leave them alone long enough and they will get around to tell you what's on their mind. Precipitous action in the woods is often accompanied

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by a catastrophe. There are times when you can hurry, and again there are times when all you can do is to sit and wait.

You can't hurry nature, and nature is what the guides are up against most of the time. Maybe he was figuring that out and sizing me up all the time he was smoking that pipe; I don't know. I kept on washing the boat. I don't know just when the idea began to percolate through my gray matter that this individual might be a real guide.

Whatever it was that made me, when he next broke silence I had a more civil tongue in my head. Perhaps the keen observer of nature had noticed a change in my mental attitude. Anyway I was ready for him when he began to converse again. We talked of boats and fishing and the deer season that would open on the morrow and the prospects of knocking over a little venison and such things as those. At last he got around to what he wanted to say.

"Partner, you couldn't let me have a fish-hook, could you? I'm goin' out to pick up my bear traps and come away this mornin' 'thout a hook, 'n' I may want to do a little fishin' before I go back."

"Sure thing!" I replied with alacrity.

It's always a good plan to treat guides as well as you know how. They don't often ask favors of city folks, but when they do it never pays to be backward or slow about granting them if you intend to come to the woods again ever. You never can tell when a guide can do you a favor, and you never can tell what one of them might do if he got down on you.

So I jumped from the boat and ran up to our shack. From my own tackle box I took out an unopened package of a dozen of my favorite snells. When I handed the package to the guide he carefully opened it, took out one hook, fixed it in the band of his hat, wrapped up the remaining eleven, and handed them back to me.

"They're yours," I said; "put 'em in your pocket."

"Now, see here, partner," protested the stranger, "I don't want to rob you. I don't want to take all yer hooks."

"Take 'em, man; take 'em. I've got plenty more."

"But I only wanted one."

"Who ever heard of a man going into the woods fishing with only one fish-hook?" I retorted. "You put 'em in your pocket and don't say another word."

Whether it was my open-handedness in giving a whole dozen fish-hooks to a man who only wanted one, and a stranger at that, or whether he pitied a man who hadn't caught a fish worth speaking of in a week, or whether it was a sudden rush of generosity, or what I never could figure out, but after some further desultory conversation the lone guide said:

"Say, stranger, do you want to ketch some fish?"

"You bet I do," I replied, "but I don't see any chance here."

"No, there ain't. But you come with me and I'll show you a trout stream that ain't bin fished this year. There's only one man besides myself that knows this stream, and I know he ain't bin thar."

That sounded pretty good, but I parried; "I'm sort of afraid to go out with one of you fellows who know the woods. You'll walk the legs off me."

"No, I won't, stranger. I'm jest goin' out to pick up some b'ar traps. Along some time this afternoon we'll fetch up at this trout stream and take out a few for supper. If I don't show you some of the best trout fishin' *you* ever had, I won't go fishin' no more, never. Now, you jest go up to yer camp and pack up a little grub and git yer tackle. Yer won't need no rod; we're goin' through some woods."

When I told Pete I was going fishing with a stranger he rolled over in his bunk and grunted, "Some piker, most likely. I wish you luck. I'll eat all the trout you get."

That's how it came about that on a pleasant August forenoon I found myself leaving our camp alone with an unknown guide, striking off through primeval forest, trusting to an absolute stranger, who might lead me, the Lord knew where. A couple of hours before I had never laid eyes on the man. He came unintroduced, without credential or recommendation. I was taking him at his face value. He took me on the strength of

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a dozen fish-hooks. He didn't ask my name, and I didn't ask his. In fact, we didn't do much conversing after we left camp. I was just as well satisfied at this arrangement, as it took all my attention to scramble through the dense underbrush and jump the gullies.

We must have walked three or four hours. I had no means of telling how many miles we traveled. For aught I knew we might not be farther than four or five miles from our shack in a straight line. But we had followed such a devious course, picking up the bear traps, that I had no idea where I was. I was lost, absolutely lost, in the midst of the great North Woods! I might wander around for days and never find a trail unless this unkempt, unshaved stranger chose to lead me.

I knew we had doubled on our tracks; I had seen the guide stop, look intently about him, take his bearings from the direction of the sun in a patch of blue sky at a clearing, and then plunge off in an opposite direction. The bear traps were all up, he said. Then he was losing me! Alone in a vast forest with an unknown guide!

It was no time to whine, however, nor to show doubt. When he changed his course I changed mine. I plunged into the dark woods after him as fast as I could, and he waited for me. We must have pursued these tactics of zigzagging an hour more, when the guide halted.

"We're getting near the stream. Better keep your eye out for a good, likely switch that'll make a good rod.

Each of us soon had cut down a light sapling and trimmed it into the semblance of a fishing-rod and affixed our lines and tackle. Pretty soon the rippling of a brook over its shallows smote my ears, and I knew we were at the stream which the guide said would yield some fish. We struck the pebbly shore. The water, coursing over the stones, murmured as it ran, making the only sound that disturbed the silence of the forest primeval. Great pines and oaks and spruce reared their heads from a land that had never known the devastating axe of the woodsman. In the dark shadows of the woods I knew trout must lurk.

"There's a stillwater downstream apiece," he whispered. "We'll work down that way."

With stealthy tread, silently we picked our way downstream a few rods. There he stationed me on a tussock of grass a few yards from the sedgy shore, while he went still farther down, still in sight and within call.

I have whipped Adirondack streams; I have brought home full creels; I have waded trout brooks all day with the water up to my waist and better; I have trolled the lakes. Down home I was counted some fisherman; but I never knew what fishing was until I stood on that tussock in the little unnamed, unknown, uncharted trout stream that rambled down through that particular glen of the great woods.

With my little rod I cast my worm-baited hook over the low fringe of alders that hedged me from the stillwater. A strike! A two-pounder! Another! Another! It was literally a case of bait and pull them in. On a little tussock not more than a foot and a half square, without stirring from my tracks I filled my creel, the pockets of my canvas hunting-coat, all the rest of my pockets. I strung them on an alder switch, and still they bit. My worms were getting low and I knew the afternoon sun was waning, but still I pulled them in.

I must have stood there an hour or more and my arms were beginning to ache from the mere exertion of drawing the fish in, when my companion downstream broke the silence. "How they comin', partner?"

"I got all I want," I was compelled to admit.

"Let's go downstream a piece and clean up, then."

When we came to disgorge our pockets and count up, I found I had taken fifty-four trout in a little more than an hour. My companion had a few more than I did, possibly fifty-eight or sixty. But the funny thing about those trout was that they were so near of a size that they looked as if they had all been cast in the same mold, all two-pounders, hardly a variation of two or three ounces. It was as if we had ordered the mess of a specified size.

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It was quite a job to clean such a mess of fish, but with the expert deftness of the guide and my slower work we had the lot packed up ready to move by the time the sun had disappeared behind the tallest pines and the shadows were beginning to lengthen over the hills at our backs.

Perhaps you think because of the approaching dusk the guide chose the shortest way back to camp? No, sir. He set out in one direction; stopped; looked; turned about, and went in the opposite direction until I couldn't have found myself. I had no more idea which way the stream lay from us than I have of the navigation laws of the Milky Way. We doubled and crossed and criss-crossed so many times that at times I doubted whether the guide himself knew just where we were. It took only a couple of hours to get back to our camp, which shows how far out of our way we had gone in the morning.

Just as I was despairing of ever seeing Pete and the shack again, I smelled the smoke from our campfire and pretty soon we broke out of the thicket not more than a rod from the place where we had entered in the morning.

Pete was preparing supper. The bacon and coffee smelled good, and there was a peculiar, superior smile about Pete's mouth as he greeted me with "I thought you'd be coming in pretty soon with an empty basket, and some real grub would taste good to you."

As the guide and myself slipped our baskets from our shoulders silently, Pete looked inquiringly. "Did you get any fish?"

"A few," I said.

The guide grinned as Pete drew back the green leaves that covered the trout and began to pick them out. He got our dishpan and filled it, then another pan and filled that, too astonished to say a word. At our insistence the guide took part of the fish with him; but before that he sat down and ate some of our bacon and drank some coffee.

As unceremoniously as he had arrived in the morning he departed at evening. "Well, s'long, stranger; I must be goin'," and he had slipped into the underbrush and was gone. We never saw him again; we never saw anybody who knew him or had ever seen him.

We paddled down the lake the next morning and expressed a lot of those fish to the city. We distributed some among other campers whose luck had been no better than ours. To every inquiry we replied as carelessly as we could, "Oh, we found a little trout brook back there in the woods."

In a couple of days the last fish was gone. Pete and I talked it over and decided we would take a compass and find that stream.

But it was as irrevocably lost as if the earth had swallowed it and the two-pound trout had gone to become eyeless fish in some subterranean cavern. We tramped those woods with a compass for days. We followed every promising lead; we paddled around the shores of the lake and followed up every stream that emptied into it; we consulted the maps; we asked other campers—very guardedly. It was of no avail; the uncouth stranger had covered the tracks so craftily that it was as if I had been led, blindfolded, to the brink of the brook and, blindfolded, led back.

Neither did we find anyone who had ever seen or heard of the uncouth stranger. He may have been a guide, but if he was the parties he guided came from some other quarter of the earth than any we ever met, and we knew nearly all the regular campers in that country. My guide was probably one of those strange, nomadic creatures of the woods, who have no fixed habitation, who come and go, who know all parts of the wilderness and cannot be lost anywhere. He was one of those who read the signs of nature with a craftiness that is almost uncanny and who read human beings with equal skill. Without doubt he had sized up my woodcraft before he invited me to the best troutfishing I ever had.

Somewhere in the Adirondacks is a trout brook, teeming with fish that are hungry for any bait you offer. I dream of it nights; I feel that tussock beneath my feet, the twitch of the slender birch switch, the pull of the two-pounder. Somewhere in North Lake country is that stream. You may find it; Pete and I never could.

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A MISTAKE IN IDENTITY

By SHELLY RIDER MEYER

A Tale of a Devil That Was Cast Out and Came Again

IT was too hot a day for riding, anyway. I wished I had not come so far. The Mexican sun was on my head like a weight. My horse was dripping with sweat, though he had been taking his time. But he was a big horse—too big for endurance—and he fretted nervously all the time. I was not enjoying my ride, and I resolved to take the shortest road home—through the gate and around by the "stony field."

When I rode up to the gate, after a short-cut along the top of an irrigating dam, old Chavez, the gatekeeper, was nowhere to be seen. I had to whistle for him. He came running with apologetic haste.

I might have known better than to let my horse stand directly in front of the bars. The old man was in a hurry and in pulling out the lowest bar his felt sombrero fell from his head. The immense hat tumbled into the road with an ungainly flop. With a snort like a locomotive my horse reared under me, straight up on his hind legs, then tipped over backwards!

How I got free of saddle and stirrups I don't remember—the merciful Providence that protects novices must have had an eye out for me—but I distinctly recall sitting in the dust where I had tumbled and watching, fascinated, as my mount of a second before landed on his back in the road with shocking force. I thought at the moment that the crack, like a pistol shot, was the breaking of his back, but I soon saw that it was only the smashing of the saddle. The beast lay for a minute with all four legs waving in the air, like a beetle on his back. Then he rolled over on his side, got on his feet in the most good-natured way in the world, and stood waiting tranquilly—for me to mount, I supposed, that he might do it all over again! I couldn't see it that way, myself. The "big house" of my Mexican host was six miles away, but I would have walked sixty before trusting myself again to that seventeen hundred pounds of equine destruction.

Old Chavez had picked up his sombrero, and now he caught the bridle. I must say that the matter-of-fact way in which he took the whole affair was a credit to his good taste. So far as his manner was concerned, it might have been a daily occurrence for a big horse to gallop up to his gate, stand on his hind legs a moment, then turn turtle while an "Americano," after taking an humble part in the performance, sat in the dust and looked on. I trust I did not betray my fear. I merely asked him to send to the stable for another mount and saddle—that I would wait its coming.

"I will receive you into your house," said Chavez, using the quaint and courteous Spanish phrase, "and you shall wait there. You do well not to mount again. One of the vaqueros shall ride him to the stable—their necks are cheap."

He summoned from the quarters a leather-faced son of the saddle, whom I suspected of having seen my accident and discomfiture, for his face wore a suspicious grin. The vaquero cinched up a crazy old saddle on the bay in place of the broken one, swung himself astride, and plunged his two-inch spurs into the horse's flanks. This last was an unnecessary humiliation to me; but who can blame a man who can do one thing well for showing it when he gets a chance? The bay reared again, but he didn't get far, for the butt of the vaquero's heavy whip met the top of his head between the ears with a thud that was sickening—

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doubtless to the brute. To me it sounded undeniably sweet.

The bay must have thought he had hit the top of the road, but he took a couple of jumps and tried it again. This time he was evidently convinced that there was no mistake, and started on a furious run, which was just what his rider wanted. In a moment the pair were a cloud of dust down the road.

"When he gets to the stable," said Chavez, "that horse will be too tired to think of any more tricks for many days."

I said nothing, but I remembered with satisfaction that horses sometimes run till they drop dead in their tracks.

We retreated into the cool interior of Chavez's 'dobe house, where a little serving-maid offered me in due course the native drinks and dainties. When at last the cigarettes were lit Chavez, all of his own accord, told me the story I will try to repeat. I only wish I could tell it in the old man's vivid Spanish, using all the little tricks with words that cannot be put into English.

"Señor," he said, with that simple directness unmixed with insolence that the unspoiled native will assume toward a foreigner whom he respects, "you nearly met the death there in the road. You did well to fall free. Why did they let you take that bay? We all know him. You thought he was handsome? And he is handsome, indeed. Once only have I seen a horse more beautiful—and more wicked. But this bay that threw you, he is not wicked truly. He does not have blame. He did not care to kill you. He had a fright, that is all. This other horse I speak of—he had no fear. It was hate he had. He could hate like a man. How we feared him! Let me tell you of him.

"He was black, this other horse—and great—more great yet than the bay. His name?—he could have but one name. El Diablo—that was his name, and I will tell you why they called him The Devil, and why they feared him more than the one for whom he was named.

"But first I will tell you how beautiful this horse was. His skin was like a baby's cheek. His tail and mane—they were not like a horse's hair. It was for this beauty that El Señor, your host, bought him—for his blood in the stock. He did not buy him to ride, no, Señor. For Diablo was well known in three States—that none might mount him. More, it was dangerous to go near him. He was like a tiger.

"Yet, there was a reason for this. A horse, like a man, is not bad without reason. Is it not so? If only we know the reason. I will tell you how this horse became a devil in fact, and earned his name. I was told by one who knows—who saw.

"When the horse was but a colt—wild as any colt is but no worse—he kicked a hostler and broke his arm. A mistake for which the stable boy was to blame, not the horse. But the boy, like a fool, hated the young horse for his broken arm, and when he was well he teased the horse until the brute, too, learned what hate was. Then the boy teased him no longer. For one day the young horse, maddened, broke his stall and came out. If he had caught the lad before he got inside the harness-room there would have been much worse business than a broken arm.

"Thus it was. The horse was taught hate by a man. And he learned his lesson well.

"Even then it was not too late. If he had been rightly trained and broken. He was commenced to be broken—that was all. His training was short. I know the trainer that had him—he is a friend of mine. Break the spirit—that is his word. And he does it—with most horses. For he is a strong man, and heavy. But when he came to this horse, it was his own neck that was nearer being broken. I was told about it by one who was there.

"After three falls (and it was a very stony corral) and after being bitten once, kicked also, my friend the trainer said he would return later to finish breaking the horse. He never went back to that hacienda again, though before he had had much business there. I saw him in Guadalajara a week after he had his little turn with Diablo. I did not speak of the affair—he was my friend. But he could not then walk without limping. Yet he is a good man with a horse. He was never thrown before, or

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since. His method—it is all right. Break the spirit—if you can. But Diablo—my friend did not get him soon enough. That was it. Diablo had already been taught his lesson, and he knew but one—hate!

"Thus it was when the horse came to us. He was very dangerous. We made a corral for him alone, with high bars and very thick. Outside of this we would stand and watch him. It was like looking at the bulls in the pen at the plaza, the day before the bull-fight. Not that Diablo looked so terrible, there in the corral with the high bars. He knew as well as we that he could do nothing. But he was waiting. He did not roll his eyes and show the white, or run up and down, or rear against the bars. He was not foolish like that. He was wise, as wise as a man.

"But as we watched him we knew that he was only waiting. When we looked at him we knew he was *thinking —about us!* And it was war he was thinking. For he looked on all men as his enemies, and felt himself stronger than us all. To be sure, we treated him like an enemy — but what would you have? We were afraid for our lives. A bull—he is stupid; he shuts his eyes when he runs at you. But this devil horse—one would dream about him and be afraid. So we cleaned him with a hose from between the bars, and when we cut his hoofs it cost us two broken ribs and Lupe sprained his shoulder; the horse-shoer was kicked in the stomach and the ground in the corral was as though plowed.

"And El Señor would bring his guests out to show them the horse, for he had many guests then, the same as now. And all spoke their wonder of Diablo. And those who did not know would say, 'Oh, Señor! Do you ride him?' And my patron would say, 'No, I love life!' And then they would be surprised that a horse so beautiful and that stood so quietly should be spoken of thus. One day a lady, who did not believe, put her hand through the bars as if to reach him. And because the horse did nothing, but stood still and let her wave her arm at him, he could not be bad! That was plain—to her. But those who knew of horses did not talk thus. Diablo would stand very quiet, but if he snapped at a fly one could see that he was ready with his teeth and quick as a snake.

"One day there came with El Señor to the corral a great blond man, blond as a Spaniard. He was a countryman of yours, an Americano; a guest of my patron, like yourself. And I do not think this man had to be told why the bars about Diablo were high and strong. But he looked a long time at the horse, and talked much with El Señor there by the corral.

"The next day a few of us watched from where we were hidden to see this Americano get killed. For everyone knew of the orders. All of us were to keep away from the corrals in the morning; only Pascual, the chief hostler, was to be ready. That is why we all came, well hidden, and watched. And, from underneath a wagon, I saw what was done. Anyone might have done it. When the horse was in his shed Pascual closed the gate into the corral—it was a heavy gate for one man, and I knew Pascual must be swearing. Then the tall Americano went into the corral, and the corral gate was shut behind him. El Señor did this, and then he, too, ran and hid, while Pascual opened the shed gate again.

"Out came Diablo into the corral, very quick. The man stood by the fence, as still as wood. It was a surprise. Diablo stood still and looked, and in his surprise he forgot his evil ways. And he didn't even remember them when, after a bit, the Americano slowly opened the corral gate and slipped out. Simple, was it not? I will tell you what it was. It was a new thing to Diablo. He had never seen a man who did not fear him, and hate him, and who did not show him his fear and hate. When he met a man who did not treat him like a wild beast, Diablo did not know what to do. So he did—nothing.

"But however that may be, that which happened is as I tell you. In a week the tall Americano was feeding and petting the horse. We who looked on thought that we were dreaming. In two weeks he had a saddle on him, then a bridle. In a month he was riding El

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Diablo about just as the little boys ride the burros. We who had known the horse said it was a miracle. There were many who held that the man must be a greater devil than the horse. Others thought that Diablo had gone crazy—had lost his mind. But he gave us proof that he was the same Diablo. For one day the Americano left saddle and bridle on when he turned him into the corral—he was to return presently, for none but he could saddle or unsaddle the horse. In the meantime the bravest of the vaqueros made the effort. We spurred him on, for it was a shame to us that it was an Americano that had mastered the black.

"The vaquero entered the corral, went up to the horse, and got into the saddle. So far, most good. We had great joy—for a moment. Then the boy went into the air, like a stone from a sling. How was it done? It was too quick for me, and I was watching with great care. The vaquero was too angry to explain to us how it was done—and too sore! Diablo was making up lost time—that was all. But when the Americano came the great horse arched his neck like the back of a cat and whinnied and whickered. I tell you, it looked as though he was telling his friend the joke.

"Oh, Diablo loved his master, now that he had found one. There was nothing the Americano could not do with him. He never rode with whip or spurs, but I think the horse would have suffered even this after a while. But to all other men he was dangerous as before. It is true he would let himself be held, by a few of us. But not until the Americano had walked many times with us, his hand on the bridle rein with ours. And even then holding him was a task we feared. For though the black would not break away he would do all else that he could think of in the way of villainy, and that was much. I had to hold him more than any. In those days I did not keep the gate, but rode behind El Señor the times that he went out on horse. And when the Americano went out with Diablo I went with them. For they trusted me with the horse—little joy I had of the trust!

"Strange, is it not, that the horse did not become better and more tame with other men? Perhaps if another one had treated him in the same manner—but no one cared to try. We did go into the corral with him, which we had not done before—without a pitchfork, but no one dared to touch him, nor would he take food from our hands. Diablo had always hated us. I think he hated all Mexicans. I think he knew there was a difference.

"No, that is not all the story—I wish it was. Many times we wondered what Diablo would do when his friend went away. Possibly the Americano would have taken the horse with him if it had not happened different.

"One evening, when the summer had passed, I heard that we were to ride over to the hacienda of Espiritu Sancto. It gave me little pleasure, for I know the weather, and while at sunset all was beautiful I knew very well that it would change. But as we set out after supper the moon was up and it was still and quiet. Too quiet! It is said that when there are no winds about it is because they are all away arranging mischief. It was like the deep, still breath a man takes before fighting.

"But El Señor and the Americano rode careless, the Americano on Diablo. And who was I to speak to them unasked about the weather?

"On the going journey the Americano was showing to my master how Diablo obeyed him. He made the black horse trot, and pace, and amble—oh, Diablo was a clever horse. That was why he made such a good villain. Such a good friend, too. El Señor watched—I think he was a little jealous. Still he and this Americano were great friends, and my master would have nothing against him.

"All this was very well. But I knew the horse was nervous. Was I not unquiet myself? It was the night. And when we got to the hacienda, and I led Diablo into the box stall in the stables, a cursed hen flew up out of the straw. Thanks to the Virgin, I got the door closed, very quick. Diablo kicked a few bars loose, that was all. I hoped he would kill the hen, for I had had a great fright. The stable boys who had followed me ran for their lives. He was a

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very strong horse, and his heels made a great noise on the wood in the dark stable.

"Now, while the gentlemen were at the dance in the great house it is true that I passed the time with my friends, and I will not deny that we took of the mescal. But I was most careful—I took but enough to warm me on the road home. For I knew it was getting ready to storm, and that I should need my head.

"When the call came for the horses and I led Diablo out, it was late, and the storm was near. A chilly wind had risen, coming from the hills. There were a few drops of rain in the dust, just enough to smell.

"I had thought that the gentlemen might stay the night at the great house, and had hoped so. But El Señor loves his own bed and neither he nor the Americano were men to stop for weather. They had no families dependent on their bones.

"As we waited in the courtyard I prayed that we might not have to wait long, for Diablo was worse than ever to hold. He backed into one of the other horses, and this other horse he jumped quick, for Diablo was quick with his heels. When a still flash of lightning cut into the sky I thought I would lose him. I was off my feet as he reared, but I dared not let go—and the bridle held. It was a heavy bridle, made after many had been broken.

"At last they came. The gentlemen had not been as careful as I with the mescal. When they stepped out of the door and saw the clouds and how near the storm was they went back. I hoped again that they would stay the night. I likewise hoped to know soon, as Diablo would not stay with me much longer.

"When the gentlemen came out again I did not know them, for a minute. For they had on borrowed sombreros and great capotes for the rain, and the people in the doorway were laughing at them and calling them rancheros.

"Just then the rain started, suddenly. El Señor and the Americano said 'good-bye' quickly and came hurriedly for their horses. My master was in the saddle first—he was eager for home. I stood a little apart from the other horses with Diablo.

"When the Americano took the bridle and flung it over the black's head I was so glad to be rid of the horse that I thought of nothing else. But when I stepped back for my own mount I turned, for I could hear Diablo's feet dancing in the gravel. That was strange—it was not his way to be wild in the hands of the Americano. Yet wild the horse was as I stood and watched—and different. I remembered afterward that before mounting he had not spoken to the horse, or petted him, as he always did. It must have been the wine in his head—and he was so sure of Diablo! But the horse jumped so that he could hardly mount him. He was a skilful rider, or he never could have got astride him.

"The people were watching in the doorway, and this must have made the Americano angry—that he had to fight to mount. For he dug his heels into Diablo's flanks—perhaps he did so to keep his balance. The black reared, but he often did that. Yet as he reared and wheeled the light from the open door fell on his face and breast and in his eyes. And I saw, as quick as that, that everything was wrong. For this horse, with ears tight back and spread nostrils, was Diablo the killer of men, twice as terrible in the night and the storm. And at the same time I understood it all. There are times when one thinks quickly. The horse did not know his rider, in the changed hat and cloak!

"Maybe I shouted, but for what good? The horse had never had an ear for me. He came down on his forefeet, and for a second I hoped. But the next instant he stood up straight. It was bright with the lightning. The crowd in the doorway screamed and my master shouted in terror. The great black poised for a moment, stretched high. Then backward they went, like a tree falling in the storm!

"Diablo was on his feet a second after. The Americano lay quiet in the light from the open door. The borrowed sombrero was rolled away from his face. And as the horse Diablo plunged to his feet and turned he must have seen, and

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known. It seems impossible. But he stopped and started to tremble all over, like a horse ridden to death, before it falls. And then he put down his head, as slowly and gently as I put down my hand—thus—with his muzzle close to the face of the man. Thus he stood, sniffing with wide nostrils for a moment before they lifted the body up and carried it into the house. And as the people made a way through the door I watched the horse. May God judge me if what I say is not so! Diablo started to follow! A step he went, and stopped and trembled. And his eyes were on the open door, and his neck was strained toward it. Thus he stood, the wind blowing and tangling his mane and tail. And he trembled.

"I took his bridle. I was not afraid of him—now. And when I pulled he came with me, without pulling against me. As I walked him slowly to the stable it was thundering overhead in the black clouds, but I think it might have been dynamite at our feet and Diablo would not have known. I had no fear of him—it was pity I felt. Indeed, it is so. When we got to the stall where I put him he went in like a burro, and stood, trembling and in a sweat. I had to leave him to go to the house.

"No, the Americano was not killed. They say that a man in liquor cannot die from a fall. It must be so—even if a horse falls on him. But he lay in bed for months with a broken hip.

"But let me tell you of the horse. Before the Americano was on his feet again Diablo was dead! The doctor of horses, whom we brought from Guadalajara for him, said his back was hurt by the fall. Perhaps that was why he had trembled on that night. Perhaps that was why he stood for days in his shed, like a sick calf, getting weaker and thinner. It is possible. I am no doctor of horses, though I have seen and known many. For my part I do not think it was all his back.

"We would have seen had the Americano got well quicker, to come and see the horse. How else could Diablo know he was not dead? But this is crazy talk.

"Of one thing I am certain—that which I have told you. I do not know if the Americano knew. I did not see him again—he went away as soon as he was able. But he must have known that Diablo did not know him that night. Nervous the horse was, with the night, and the storm, and the light from the open door. But that was not it. It was that he did not know whom he had on his back. He thought he carried one of those he hated, and he wished to kill him. He was in that moment the old wicked Diablo. But this was not the same Diablo as the horse that trembled when he saw who it was that lay so still in the driveway. It was not Diablo the man-killer that died—of a twisted back! At least, according to the doctor of horses it was his back. And he should know.

"Your horse has not yet come, Señor. It is a long time to wait—I trust I have not made it longer with my talking. But every word I have said is true.

"Ah, I hear them now. They are here. They have sent you the gray—a great horse, and a good one. You may be glad when you are on him that it is not Diablo you have between your knees. Only one man ever rode him. And he did not ride him for long."

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FISHING EN MASSE

By PERCY M. CUSHING

PHOTOGRAPHS BY BROWN BROS.

EVERY day during the season the boats go out from the Battery at the lower end of Manhattan Island loaded down with the city's anglers. It is real deep-sea fishing they seek, on the Cholera Banks over the bleached bones of old wrecks where the black fish lie, on many a reef and ledge that the veteran captain knows. It is not sport as the trout fisherman sees it, but it is fishing for all that, and it is the only fishing that many of its devotees know. Therefore it has its place.

"HI, down dere, you hav me all tangled ubb, alretty." "G'wan! You're tangled yourself, you fat mass av bhlubber!" "Stoppa da fight, stoppa da fight, eet maka evra'body da beeg dam tangle."

And so they went at it, for four long hours, three crowded decks of them, while the steamer, with the lines wound about her until she looked like the household kitten after a session with grandma's ball of yarn, wallowed to the oily lift of the ground swell, and I cursed myself for not having had sense enough to stay ashore.

Prior to this particular occasion I had confined all my piscatorial endeavors to certain trout streams in Montana, and various lakes in Wisconsin and Minnesota, where a light split bamboo or a five-foot lancewood bait casting wand were considered the most effective tools, but when I bumped into a second cousin in New York and he asked me if I liked to fish I fell for his lead at once. We compared notes, and from his conversation I gathered that his style of fishing for salt-water denizens was somewhat different from what I had been used to, and in a rash moment I showed some small enthusiasm to become more closely acquainted with his game. Then, weakly, I let him persuade me to try it, and with even greater evidence of feeble-mindedness, permitted him to send me off alone on the broad Atlantic adjacent to New York City.

"But I have no tackle," I insisted, that day my cousin persuaded me.

"Don't need it," he retorted, "never take it. Hire all you want on the boat. Wish I were going. Sorry I'm not. So-long, old chap, and good luck," and, alone and unprotected, I boarded the big side-wheel steamer that every day, from April to January, takes New York's salt-water anglers down the Bay, through the Narrows, and out beyond the yellow tentacle of Sandy Hook to the fishing banks.

She is a rambly, spatulate craft, with three decks, and she was chuck-full of humanity when I crossed the gangplank.

There were men, and there were women, and children, and babies. I counted nine babies in arms. As near as I can judge, there were five hundred persons on board when she slipped away from Pier 1, at the foot of New York, and began to churn the Battery and the skyline of the metropolis into a smoky miniature astern, and finally to oblivion.

It had been quiet enough aboard, while we were pushing down the upper Bay past Miss Liberty, and into the Narrows, but once the spell of the stone streets and the odor of the city had been washed out by the drift of salt from southward, a change manifested itself. The crowds

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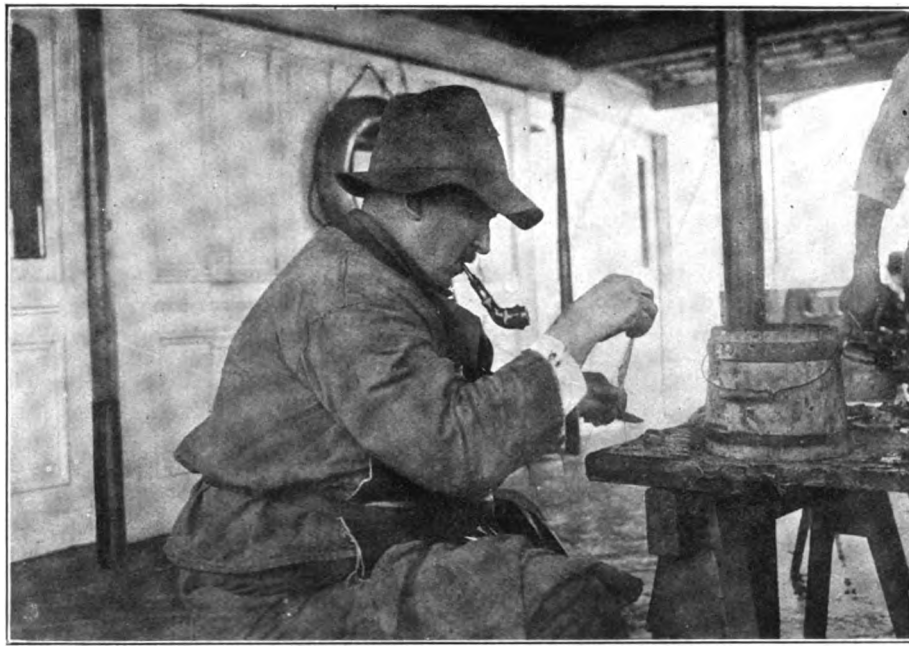

THEY CLEANED BAIT FOR WHOSOEVER WILLED THEM AT FIVE CENTS A BUTTER PLATE

THERE WERE MEN, AND THERE WERE WOMEN, AND CHILDREN, AND BABIES

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that had sat on the camp-stools along the upper decks bestirred themselves. Men with satchels such as are carried by plumbers' assistants gathered along the rails.

Reels and rods popped into view—rods such as I had never seen before—great, thick, cudgels that bore close relationship to billiard cues, and were as thick at the tip as a fly rod is at the butt. And the reels! I looked in vain for the German silver multiplying type of which I was so fond. It was absent, and in its place were huge brown, wooden things, resembling wheels of full-grown baby carriages.

I sidled over to a stout and elderly man with a sharp blue eye.

"Are we going to hit 'em to-day?" I asked.

"Ya," he replied, "always we hid 'em."

"What kind?" I asked.

"Flukes und sea basses."

He was busy groping in his plumber's satchel—I observed now that everyone seemed to carry a plumber's satchel—and presently he hauled out two large chunks of lead, which he proceeded to tie to his line. Perhaps there was something in my eye that told him I was a novice, for he explained shortly:

"Sinkers."

"Right," I agreed. He groped again in the plumber's satchel.

"Hooks," he grunted presently, and tied on two of them, great big, ungainly hooks.

"Indeed?"

Then he turned his blue eye upon me. "You can hire a pole," he said, "from der baid man downstairs, but it is safer to fish mit a drop line, if you doan be used to it."

I thanked him and went down below to hunt up the "baid" man. Eventually I found him behind a wire cage surrounded by large quantities of unpleasant-looking things which I was informed were skimmer clams and constitute the chief bait of the New York fishing banks. But before I reached him I ran across the Purser, and he invited me inside his office. A ruddy-cheeked Englishman he was, with ten years of the job behind him, and, he said, despite his gray hair, as many more before him, if not on that boat, on some other.

"April to January," he said, "we take them down the Bay, and they have the time of their lives. Women and men, and the children! We've some women who go as often as the men, and that's saying a good deal, for there are a dozen—the regulars we call them—who do not miss a day as long as the season lasts.

"What do we catch? Oh, bergalls and black fish in the early months. Then in June and July the sea bass, and the fluke begin to run in August. After that it's black fish once more, and then, in the winter, cod.

"It's all bottom fishing," he went on; "you wouldn't care so much for it if you've fished fast water for trout, and the Western rivers for black bass. I know, for I spent four years in Ontario. But here it's the only kind of fishing they know, and it's just as good to them as the other to you and me."

I wandered over and interviewed the "baid" man. For a consideration he furnished me with a billiard-cue rod, a cart-wheel reel, a mile or more of heavy linen line, two huge hooks, and a pound of lead worked into a sinker, which he solicitously fastened in place on the line for me.

"How many bunches of bait?" he asked.

"Search us," I answered, "suit yourself." He did. He handed me out a wooden butter-dish filled with half a dozen indescribable lumps of animal life tied together with string. These were skimmer clams, a variety of soft clam, I believe.

"You clean your own bait, or have somebody do it?" he demanded. That carried no intelligence, so I played safe and said: "Have somebody." He pointed forward, and I went out on the lower deck, which was now crowded with men and women, all carrying little wooden butter-dishes, with strings of those indescribable lumps of animal life on them. Along the deck, from bulwark to bulwark, were stretched long tables. At these sat hairy-armed men, with sleeves rolled back, and fish-knives in their hands. They were members of the crew, and they "cleaned bait" for

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SHE BLOOMED FORTH WITH A FURIOUS RADIATION OF LINES

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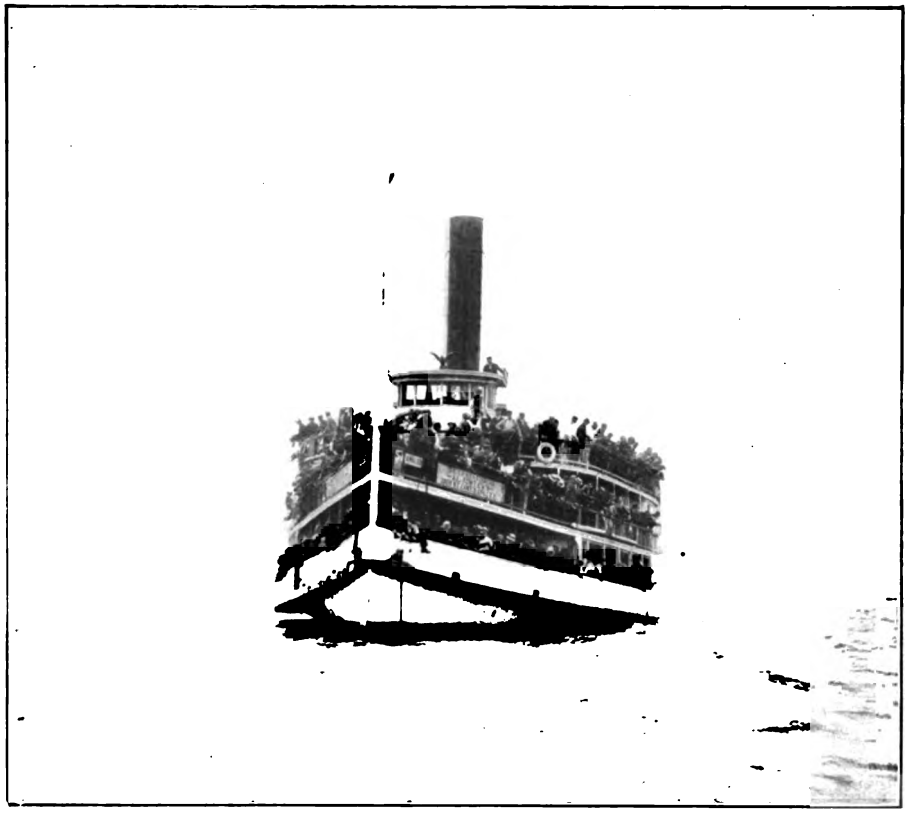

AS NEAR AS I CAN JUDGE THERE WERE FIVE HUNDRED PERSONS ON BOARD

whosoever willed them, at five cents a butter-plate.

Cleaning bait consisted in separating the soft portions of the skimmer clams from the hard, and cutting the hard, which, because of its greater toughness, makes the best bait, into chunks of the proper size. The unused parts were thrown on the deck in heaps. As soon as the bait was "cleaned," it was returned to the butter-dish, a handful of rock salt tossed on top of it (they told me salt kept it hard), and the fishermen jostled out of the forward deck to give others a chance.

In one corner I saw a tall old man with a snow-white mustache tying knots in the mouths of skimmer clams. At least that's what he told me. In purport he was tying the soft parts of the clams into many hard knots, one upon the other, so that they would stay on the hook as well as the hard bait, and not have to be thrown away. It was one of the economies of the careful fisherman.

About this time a new kind of bait began to make its appearance, small, flattish fish. "Herrin," they were, one old Teuton informed me. Men clutching "Herrin" in either hand, and, I was about to say, with a long knife between their teeth, sat down at the tables on the forward lower deck, and went to work. Nich, cr-r-r-ish, out came the thick steak-like part of the back, which is used for bait, and splash! went the mutilated body on the deck to mingle with countless others that in a moment seemed to fill the air from all directions as the van of the fisherfolk got busy cutting bait. The fish made the best bait for fluke, or flounders, they told me, while the clams were the real thing for sea bass.

In five minutes the forward deck was a shambles. Looking on in awed wonder, I could not but think that, somewhere, there must have been the trace of a resemblance to Kipling's *We're Here*

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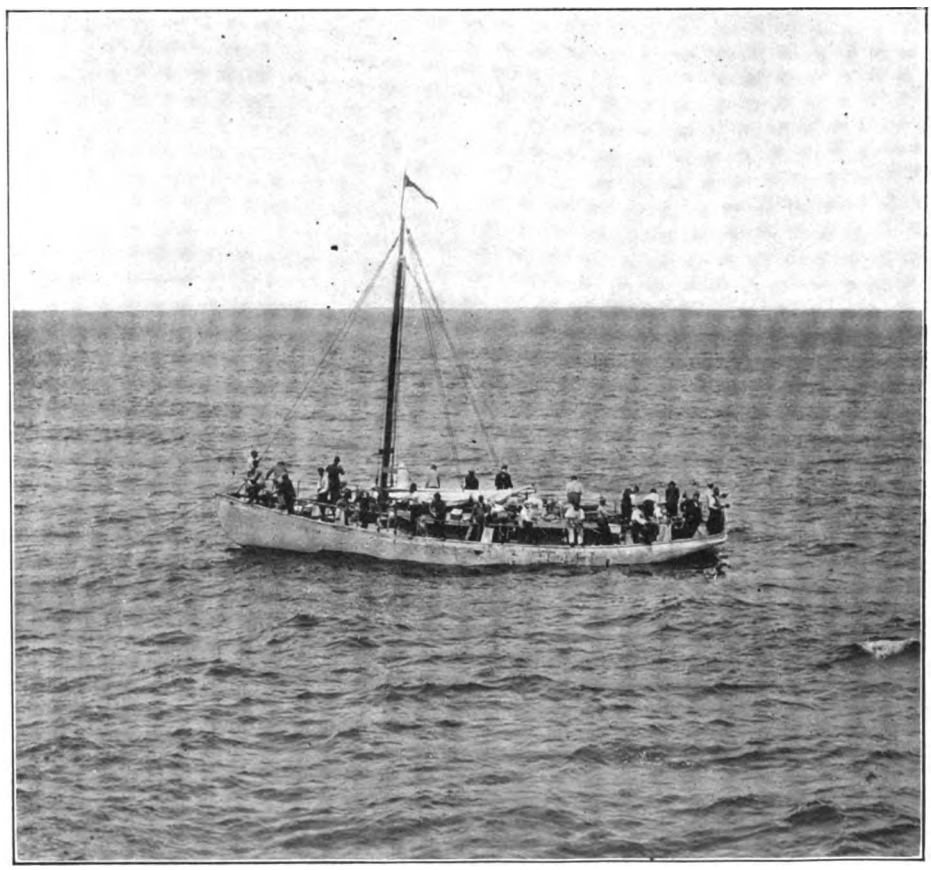
at dressing-down time—not in the people, of course, but in the fish gore, and the sound of the knives, and the slimy, scaly, dripping tables.

Then I began to notice the crowd at the bait cutting begin to thin out. With a butter-plate tucked in a fist, one man, then another, and another, would slip out of the press of people and up to the upper decks. They were beginning to hurry now. Old men quickened their steps, younger ones almost ran; women bustled hastily as they might. Already the speculation as to our destination, which is always current on the way out to sea, had died out.

The majority had thought the Captain intended taking us to the Cholera Banks to the east at first, but the old side-wheeler had poked her nose down Gedney's Channel, and past the Hook, and headed along the Jersey shore. Then it was known instantly that the destination was off Seabright and Long Branch, where the water is scant fifty feet, and the fish lie so close in that you can see the break of the lazy combers on the white ribbon of the beach without straining the eye.

They were gathering on the upper decks, the fisher folks, with bait and rods and tackle — long since rigged —in hand. It was on the top deck I observed that most of the old men collected. They were the "regulars" of whom the Purser had told me—every one of them armed with a bludgeon rod and monster reel. On the second deck were most of the women, some with rods, others with hand lines. The main party of the drop-line fishermen were on the lower deck, where they ranged themselves along the bulwarks, spreading their elbows eagerly to prevent too close com-



HERE WE WERE SURROUNDED BY OTHER SMALLER FISHING BOATS

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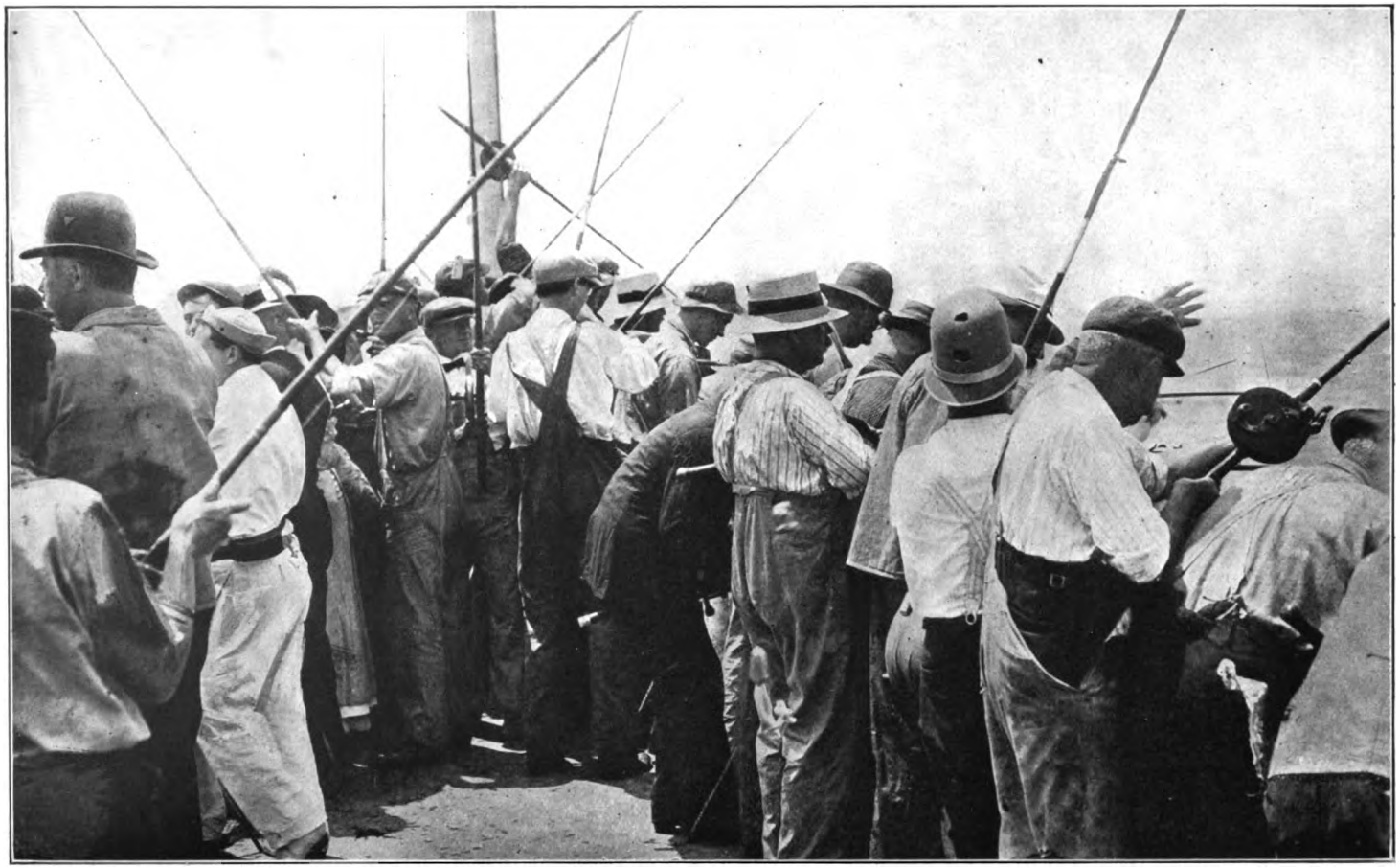

I COULD NOT UNDERSTAND WHY, AFTER TEN MINUTES OF FISHING, THE DEAD WERE NOT PILED UP ALL ALONG THE RAIL

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panionship of their neighbors, and each hugging greedily his two feet of bulwark as though he expected someone to try to tear him from it by force.

"That's the way they always do, the swine," one old graybeard told me confidentially. "They camp in a place as soon as they get bait, and they stay there till we up anchor for home. They'd hog it all if they could," and with a heave of his shoulder he squeezed his way between a fat-faced Teuton and a stoutish fisherwoman, who glared daggers at him for the intrusion.

We were in close to shore, not more than half a mile from the break, I should say. Presently I heard the clang of the engine-room bell, the steamer lurched up on herself, lost headway, and swung off to the wind. But before the harsh clamor of the windlass engine sounded and the chain cable rasped through her hawse pipes, she bloomed forth with a furious radiation of lines that spouted from her decks like sparks from a mine on Fourth of July. On the upper deck, the great wooden reels whizzed, as the men behind them shot their lead like rifle balls a hundred feet out from the side of the vessel.

Down on the lower decks, men and women stood twirling hand-lines weighted with monster sinkers carelessly about their heads and those of their neighbors who dodged for their lives.

"Look oud, look oud," breathed a stalwart German who stood a yard from me as he whirled frantically a huge chunk of lead. "If I make a slips, I might hid you." I needed no further warning.

I gave up trying to squeeze in between a fat Italian and his wife on the lower deck, and went aloft with my hired rod. As I poked my head above the top of the companion-way, Ziss! went a sinker three-eighths of an inch from my nose.

"Look out there!" I shouted, but my near assassin paid no attention. For that matter nobody paid any attention. All were too busy fishing. They were packed along the rail elbow to elbow. As the steamer swung to the wind and tide, the line of one man would cross that of another. Then somebody else's line would cross both. In a moment there was a hopeless tangle. The man who was first crossed would leap out of his place by the rail like a rabbit from a burrow and into another position further along the deck, uncrossing his line behind the heads of his neighbors, but no sooner was he uncrossed than someone again would cross him.

Above the clatter of feet on the decks, the whirr of the huge reels, the hiss of lead whirled into space, and the splash of the water, rose insistent and never-ceasing a babel of warnings of "Look out, look out, you're tangling!" Now and then someone caught a fish.

More often than not the lucky one would haul up his flounder or sea bass, hopelessly tangled in half a dozen lines, leading to all three decks, whence the owners would shout angrily back and forth to each other while they worked to clear the tangle.

Half an hour went by and I had found no opportunity of making a cast with my own billiard-cue rod. Twice I had approached the rail intending to cast, but just as I was ready somebody had popped back into the throng, leaped into the air with an energetic hop, peculiar, I believe, to deep-sea casters, and hurled a pound of lead rocketting out from among the heads of the rest of us. And each time I had lost my nerve, gone faint and sick in the anticipation of seeing that lead projectile shatter through somebody's skull, and crept back to the shelter of the deckhouse.

I could not understand why, after the first ten minutes of fishing, the dead were not piled up all along the rail. Casting a pound of lead willy nilly through a gang of two hundred persons seemed to me a pastime fraught with uncertainty.

"What keeps them from hitting somebody?" I asked the Purser later with a shudder.

"Good luck and the grace of God," was his solemn answer. Later he told me that in his ten years he had never seen a skull crushed by an ill-timed cast, and only occasionally had he seen persons hit.

Presently the whistle of the steamer barked sharply. "Haul in!" the cry went from deck to deck. Instantly every fellow was busy reeling and pulling in his line, but before the act was half accomplished the donkey engine had

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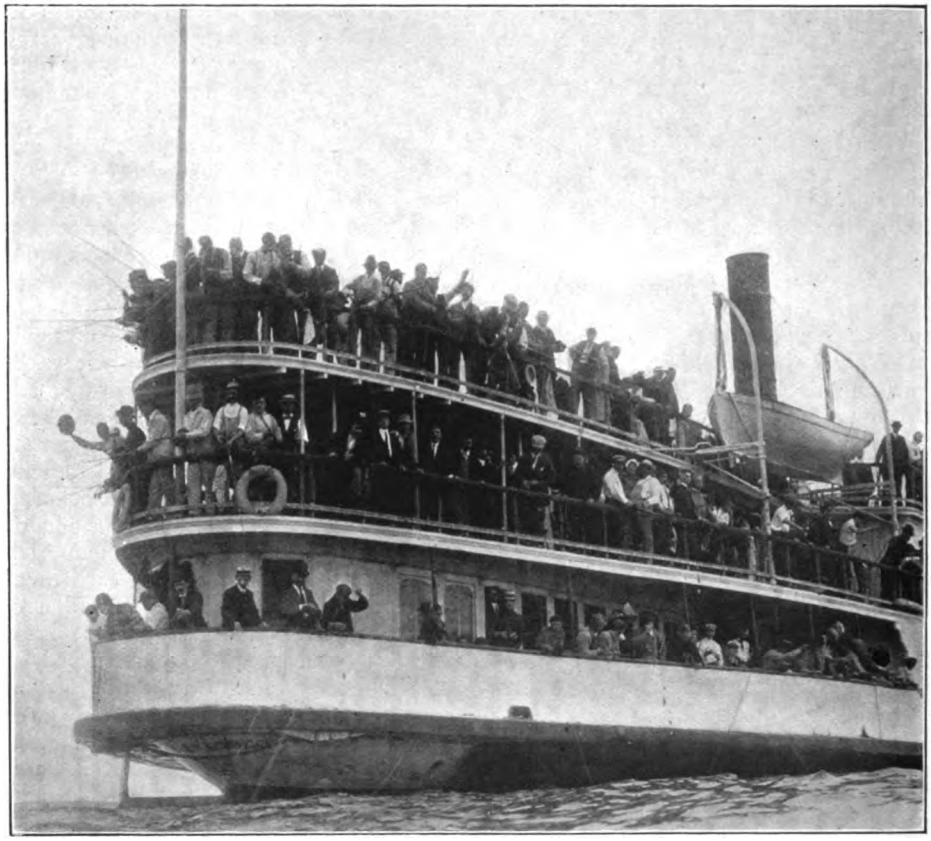
snatched clear the anchor, and the vessel forged ahead. That meant unparalleled disaster to lines.

Swept astern by the advance of the ship, they mingled astern, wound around the rudder, the paddle-wheels, and each other, and in a moment extreme confusion was turned into furious uproar. Men and women screamed suggestions and commands that were disregarded by those with whom they had become entangled. But the steamer moved ruthlessly on, unmindful of such trivialities, toward a new ground where the fish were expected to bite better.

A mile farther on she anchored again, and the Fourth of July exudation of lines was repeated. Now we were surrounded by other smaller fishing boats, and despite tedious tangles, fish began to flow aboard in broken silver streams.

Finally I found a place and got my line out. In a moment I was snarled; but through the tangle and mess of it there came a dull tug. I struck as I had learned to strike in the fresh water, and then it came up, not a fish by the feel of it, but a log or something from the bottom. I reeled in, dragging a ton of lines of perspiring and angry neighbors with me, and I'll be blessed if I didn't have a fish after all. Hopelessly enmeshed, strangled, bound, and knotted in the mess of tangled tackle, it hung there, a single, inanimate, eight-inch fish.



EACH OF THE THREE DECKS HAD ITS FULL COMPLEMENT OF FISHERMEN

"Bergall," said somebody alongside; "ain't much for all that tangle."

"No," I said, "not much!"

After a long time, enlivened by the remarks of my comrades in entanglement, I got my line free, and let it down to try again.

In a minute I had another bite, and reeled in. Luckily I am not a drinking

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man. If I were I could not have been held responsible for any eccentricity up to suicide. There, dangling at the end of my hook, was an appalling sight. It was mostly head, bony, spine-covered head, with a rough, reddish body, and a mouth that threatened momentarily to engulf the rest of its face. Furthermore, it croaked, harshly, hoarsely, and gutturally. I swallowed hard and hung on tight to myself.

"Is much the matter with me?" I asked a fellow next, who, I later observed, was a woman.

"Sea robin," she returned laconically, with a second look at me; "guess you're a greeny. Bat it off."

But, fortunately, before I could act on her advice, it fell off itself, and vanished again into its native haunt. I wish it could have realized the feeling of relief its going gave me.

Just then I discovered my German friend who had been tying knots in clams' mouths. His face was red and perspiring.

"Vell," he called, "vat luck, if henny, mine friend?"

I shook my head, and he paused long enough in his efforts with his big reel to show me three four-pound sea bass and a large flounder which reposed in a gunny sack at his side. That was another thing about the fisher army which swarmed the steamer—each had his own gunny sack. Creels there were none, and for that matter with good reason, for it would have taken sadly overgrown wicker-baskets to have contained the proportions of a few of those great, flat flounders.

Presently, with the fear of those whizzing sinkers upon me, despite my effort to act as unconcerned as my fellow-piscatorialists, I went back to the lower deck and wedged myself in between two of the drop-line fishermen.

IT WAS ON THE TOP DECK I OBSERVED THAT MOST OF THE OLD MEN COLLECTED

"It isn't what it used to be," one of them was saying. "I remember when I first came down on these banks thirty-four years ago. You could catch fish then—none of this fooling with midgets,

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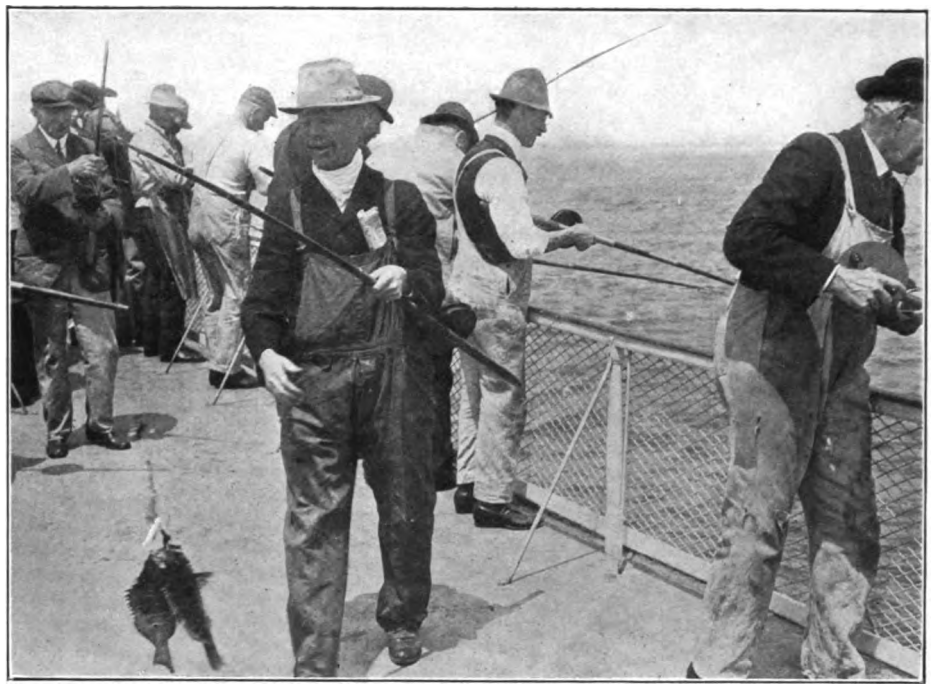

NOW AND THEN SOMEONE CAUGHT A FISH

but real fish—bass that weighed five and six, and ten and fifteen-pound fluke. Look at it now—the difference."

Somewhere before I had heard that same complaint. It took me back to the fresh water where the fished-out streams and lakes were the rule, and the old fellows sat idly all day with a listless rod and dreamed of the fish they used to catch. Was even the ocean itself getting fished out? Impossible, yet—"it ain't what it used to be," the man was saying again. But before I could speculate further, there was a shrill shriek nearby. Somebody on the upper deck had hooked one of those unspeakable sea robins, and in jerking it from its native haunts had been too precipitous and had catapulted it, flapping, against the face of a pretty girl who was leaning unexpectingly over the lower bulwarks.

Then, in the midst of the confusion and the apologies shouted below by the offender above, we up-anchored again and swung off to a new berth. It was then that I began to notice the long, rising heave of the boat to the swell that was running. It was apparent, too, that others noticed it. These were lined unhappily between the fishermen along the rail, or stretched out on the lounges in the cabin below. I took a tighter grip on my courage, reefed my belt and determined to let imagination have nothing to do with it.

A dark cloud bank moved in from sea, and a rain squall drifted across the water and was gone. About us, rising on the swells like corks, and sinking into the hollows out of sight, fishing dories bobbed drunkenly, with the men in them pulling on bright yellow oilskins against the rain. They were the Seabright and Long Branch men who fish for a living, someone told me, and I watched the easy way they stood in their dories, impervious to the terrific pitching and tossing of the tiny crafts.

Noon came, and with it huge bags of doughnuts and sandwiches popped into view. Those who had brought no lunch hastened below to the bait tables, produced knives, and in a minute had dressed some of their morning catch with which they went to the kitchen of the restaurant, where was a sign announcing that fish would be cooked for owners at ten cents each.

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When I got to the upper deck after luncheon I found the regulars there, grim and dripping. They had fished right through the rain unprotected, and they gave no thought to stopping for lunch. They had bought their tickets to go on a fishing trip and they were going on it.

And so the afternoon dragged on. At three o'clock the word went about that there was but half an hour more to fish. It was sort of like ringing the bell at the beginning of the tenth round. Everybody settled down for a grandstand finish on the last lap, and I was with them, for it dawned upon me that I had been too amazed at the scenes about me to do more than catch the single tiny bergall and that sea robin nightmare. I got my line over without delay and fished valiantly for the remainder of that half hour. The net result, two sea bass, of about two pounds each, which came with all the fight of water-soaked logs from the bottom.

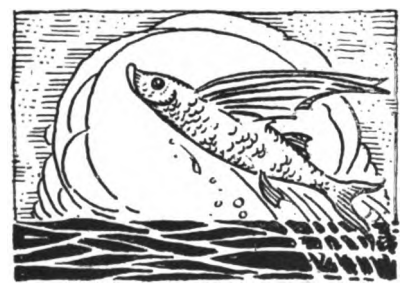
Then the whistle tooted, there was a wild scramble to wind in lines, the donkey engine roared, the anchor came up, and we headed into the mist where lay New York.

I sat down to take stock of the day's sport. I say sport advisedly. But five hundred brethren fishermen called it that. And in the final analysis no doubt they were right. It was sport. They were not laboring under the disadvantage of comparison. It was all the fishing there was to them, and they had a perfect right to call it sport.

And surely they had a good time. Perhaps, after all, it was not so much the fishing itself, as being able to do it. They sat about me with their lines wound over the legs of camp chairs to dry. The low outline of the Hook came to us and dropped astern. We picked up the green lift of Staten Island, and off to the east the curve of Long Island. The Narrows converged ahead of us, and we passed through and into the upper Bay.

Miss Liberty stepped out of the afternoon haze to wave us the chill welcome she knows so well how to hand the homeseekers from other lands once they have passed in beyond. Faint and uneven and gaunt behind her, like the vision of a ragged dream, showed the skyline of the metropolis. And with its dawning there fell of a sudden upon the boat a silence. The stories of the big ones that got away died out on the lips of the oldest regulars; the women lapsed into silence; even the children ceased chattering.

It was the spell of the brick walls and the stone pavements that reached out even beyond Miss Liberty herself to grip all those who, coming up the Bay, pass within its spell. A light seemed to go out of five hundred eyes, and the dull reflection of the shadows under towering structures came to take its place. The city was taking back its own. I understood it then. It *wasn't* the fish; it was the fishing!



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ROWING DOWN THE MISSISSIPPI

Andrew Koehn, Former Quartermaster and Champion Oarsman U. S. Navy, Does the Trick in Forty-six Days

A CLOSE rival of Steamboat Bill, of popular song fame, is Andrew Koehn, late of the United States Navy. Mr. Koehn has accomplished the feat of rowing from the source to the mouth of the Mississippi in forty-six days. The facts printed below were furnished by Mr. Koehn, as were also the photographs which accompany the account. The boat used was of galvanized steel, ten feet long, with a forty-five-inch beam and fourteen inches deep. It was built with a flat bottom with a wooden floor on which was placed the mattress for the bunk. The boat was almost entirely decked over, leaving rowing space only.

Forward and aft stanchions were erected for awning and canopy in storm and for a covering at night. This canopy buttoned close over the cockpit, making it watertight. For rowing during rainstorms Mr. Koehn used a rubber sheet fastened around his waist and buttoned tight to the cockpit edge. A mirrorscope was rigged in the stern to enable the oarsman to see ahead while rowing without the trouble of turning around. The weight of the entire boat was 380 pounds. Nine-foot spoon oars were used.

The start was made from the highest possible point above Lake Itasca — "within half-mile of source of Mississippi" are Mr. Koehn's words. Of course, the exact source is somewhat difficult to determine, but for purposes of the trip Mr. Koehn may be said to have started from the source. The start was made at 4:30 a. m., June 16th, the time being taken by Professor Wenting, of the University of Minnesota. For several miles the chief difficulty was to find water enough to float the boat even with its four inches of draft.

Below Lake Itasca a dam was encountered which was designed to keep the water of lake at a medium level. After a portage around this dam there followed a six-mile drag through mud and sand, the Father of Waters being a mere thread at this point. At one point three and a half hours of hard work were required to cover three-quarters of a mile. This was the story for the first two days, the tale of the first being seventeen miles and of the second nineteen, working seventeen hours each day.

ANDREW KOEHN
The man who has gone Steamboat Bill one better.

On the third day there came relief in the shape of enough water to permit poling the boat except in the rapids. On the evening of the third day enough water was found to make possible rowing with short oars carried for that purpose. This day's travel was thirty-three miles, and landed Mr. Koehn at Bemidji, the first town on the river.

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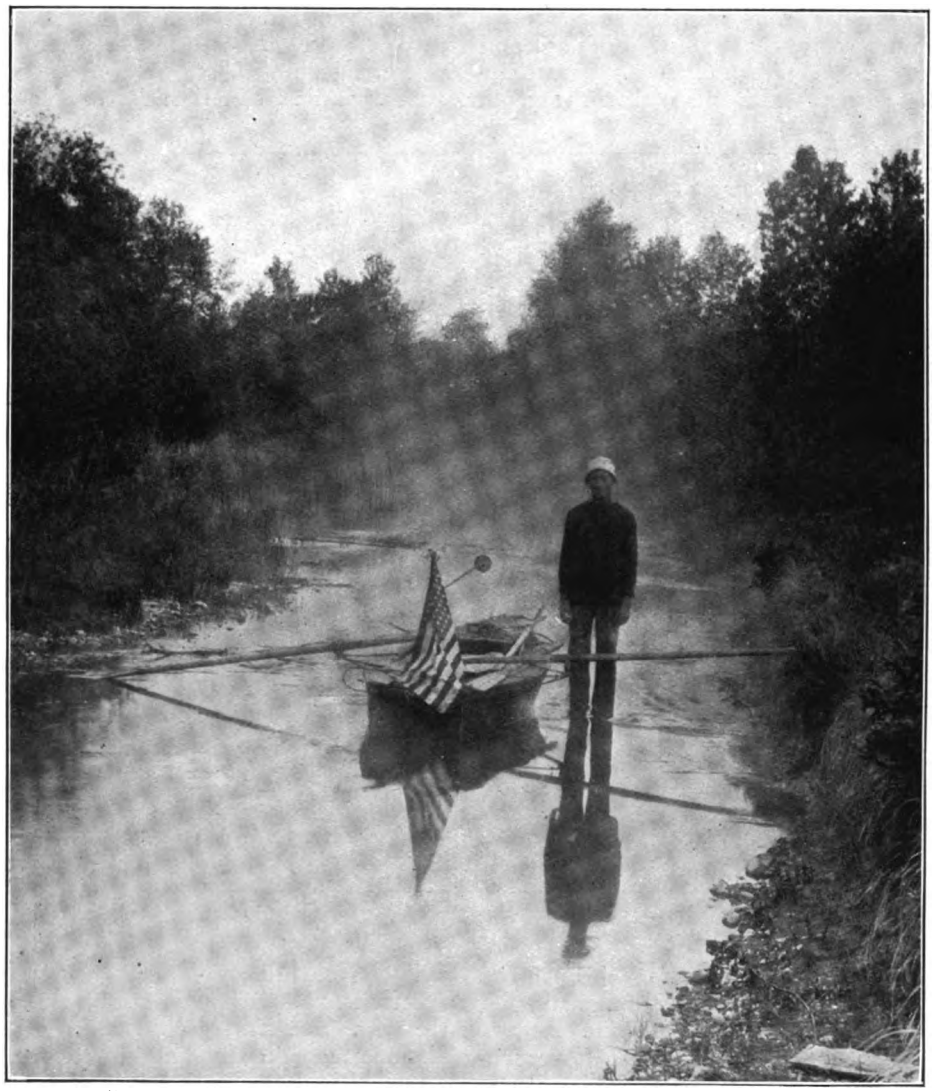
In the next stage of the journey the principal trouble was on the portages around the dams and falls above St. Paul. Mr. Koehn found twelve of these, necessitating carries of from a few hundred feet to half a mile. Another difficulty was with the logs which he found in the river in great numbers. All of the rapids were shot, although at some risk, especially in Pike and Sauk.

Below St. Paul it was easier going; at least the troubles were of a different kind. Here Mr. Koehn began night pulling, which was arduous because of the number of wing dams which forced him to cross the river. In one night he reports crossing the river seventy-two times. Usually the dams were marked by a light. Sometimes, however, the presence of the dam was indicated by the boat ramming into it head on. Lake Pepin brought heavy weather, although not so bad as that encountered on Lake Winnibigishosh above, where he struck



"FOR SIX MILES I DRAGGED THE BOAT OVER SAND AND ROCKS"

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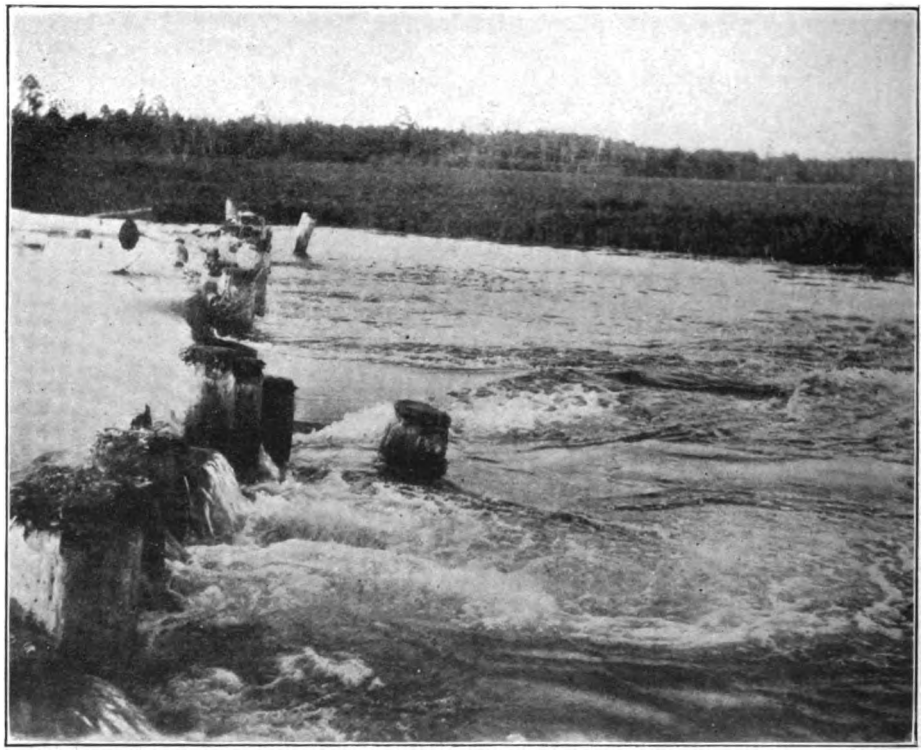
the heaviest sea he ever faced in an open boat and was nine hours pulling thirteen miles.

Two hundred miles above Keokuk he began to feel the effect of the back current from the great dam at Keokuk, and coming down to St. Louis he pulled twenty-six hours straight without sleep, resting only while eating. This accounted for 106 miles of distance. His strongest current was found south of the mouth of the Missouri, and from this point to the Ohio he averaged five miles an hour, having no head winds to buck.

At Baton Rouge he began to encounter the back-water from the Gulf, and the hardest kind of pulling was necessary to average three miles an hour. Here he made a pull of thirty-two hours without stopping for sleep or rest in an effort to cover the last hundred and fifty miles. The end of the Eads Jetty was reached at 11:30 p. m., July 31st.

The actual pulling time of the trip was 723 hours, with an average of 3½ miles throughout the trip and of 57 per day. According to the Government survey, the distance covered was 2,567 miles. Mr. Koehn claims for his boat, the *Itasca,* the distinction of being the only craft of any description to make the entire trip and for himself that of being the only man to row the whole distance. He concludes, "I do not believe my record will ever be beaten."

Mr. Koehn's best time for one day's pull was 85 miles in 17 hours and his poorest was 34, bucking a head wind all the way. He was greatly bothered by flies and mosquitoes and also by rain and heat, and in consequence lost twenty-two pounds in weight. His average day at the oars was seventeen miles, and he did not average over five hours' sleep a day. The flies and mosquitoes made sleeping in the hot afternoons impossible. Inability to secure proper food weakened him greatly, and he was compelled to drink large quantities of strong coffee to keep himself awake while pulling.



OUTLET AT CASS LAKE—MR. KOEHN SHOT THE SIX-FOOT OPENING IN THE MIDDLE

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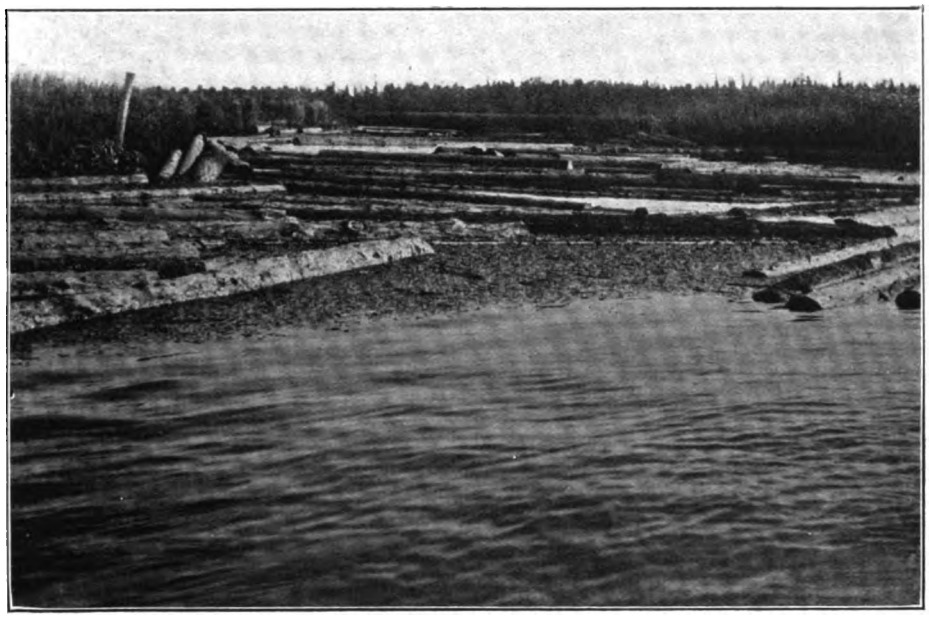
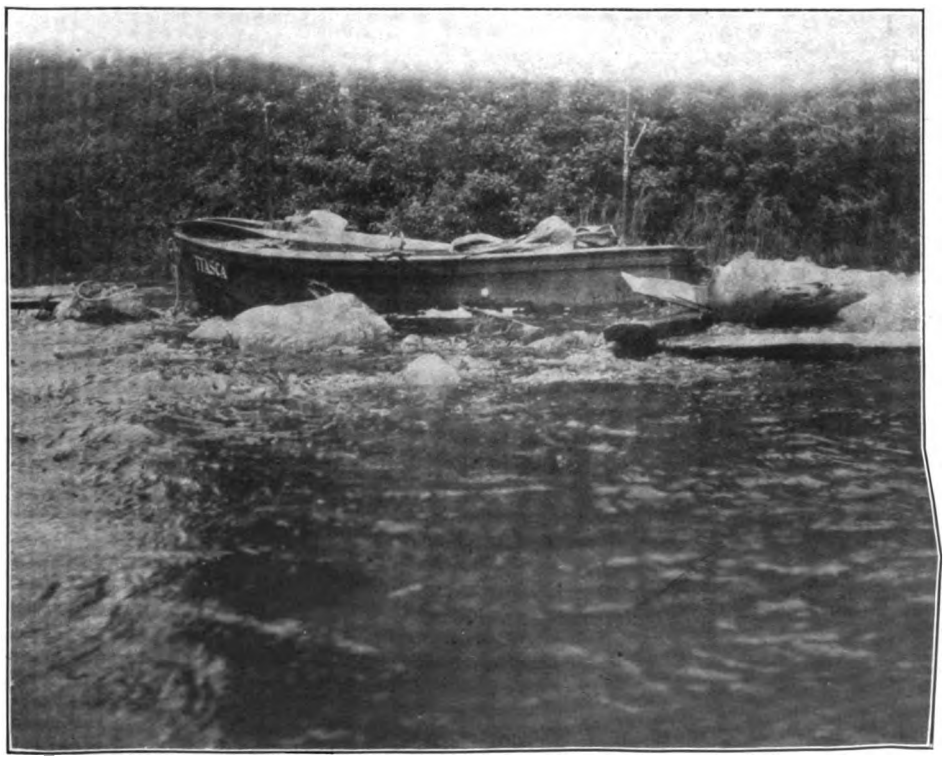


THIS LOG JAM FORCED A CARRY



READY FOR THE START "WITHIN HALF A MILE OF THE SOURCE OF THE MISSISSIPPI"

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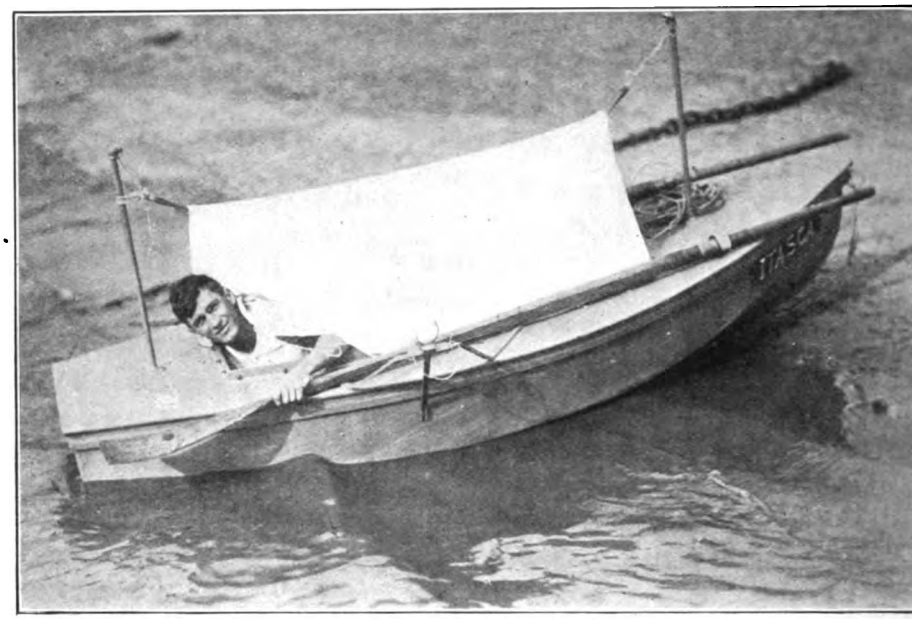
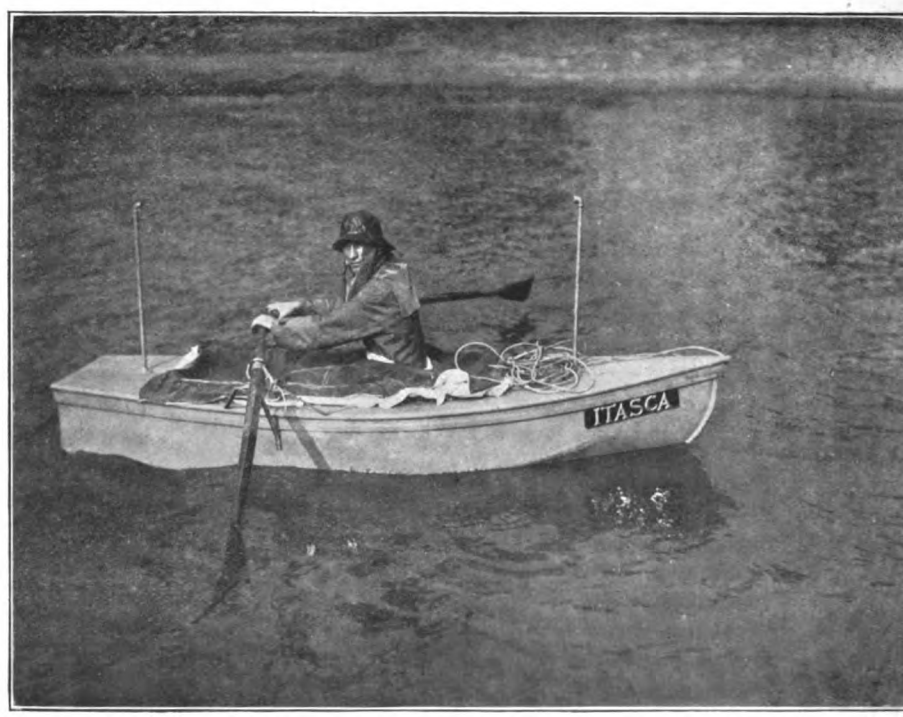


THE AWNING RIGGED FOR THE NIGHT



READY FOR ROWING IN THE RAIN

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FOOTBALL FOR PUBLIC AND PLAYER

Herbert Reed Writes a Book on the Great Game That Should Be the Standard Text for Years to Come

THERE are, roughly speaking, two classes of football adherents, representing, again roughly, two quite widely different physical and mental attitudes toward the game. These are: the spectators in the stands—leaving out of account those who have themselves played in recent years—and the players and coaches on the field. These two classes see the game in quite widely differing lights and usually form differing—and sometimes opposing—opinions.

As was stated at the outset, these classifications are rough and general. The two classes overlap and flow together. Many a spectator in the stands is as good a judge of good football as the men on the field, and occasionally a man on the field would find a more appropriate place in a comfortable and irresponsible seat in the stand.

Probably the great reason for this divergence of view and opinion has been the rapid development in rules and methods of play in recent years. The average spectator, seeing one or two games a year, has had little opportunity to familiarize himself with the game as it is actually being played before him. As a consequence the greatest credit is given naturally to the plays that leap out sensationally to the obvious view. The long runs of a White, the drop kicks of a Pumpelly or a Brickley, the broken field running of a Thorpe are hailed as the greatest football of the year. These men deserve their meed of praise, and what is said here is not meant to detract in any way from it. But the fact remains that there were ten other men on the team in each instance, each of whom was tremendously busy with his appointed share. If any of them had weakened at the critical moment, the task of the star would have been rendered far more difficult, if not impossible.

But the man in the stand knows far too little of what this interrelation of effort implies. From where he sits the game is often a hurly-burly of plunging, shifting action, of running, blocking bodies, a flying, rolling ball, a kaleidoscope of jerseys and moleskins. How is he to be made to understand the heart of the game—the strategy and tactics that suddenly lift the Brickleys and the Whites into prominence?

Here is the chance for missionary work, and the missionary has appeared. A book* has been written for the express purpose of explaining and interpreting football to player and public alike. Its author is Mr. Herbert Reed, known to readers of this magazine for his articles on polo and football. Mr. Reed has been a writer on football for many years and a careful student of the game since his own undergraduate days. Needless to say, he is a sincere lover of the sport. No one else could write of it intelligently or fairly. Nevertheless, it is a strange book that he has written—strange because it is so sensible. In the midst of much writing that is hysterical and unbalanced, shot through with hero worship and sprinkled with strange phrases that confuse the reader still further, he has chosen to write a straightforward analysis and description of the game that is surprising and very illuminating.

It is not the intention here to attempt a review and summary of Mr. Reed's

*Football for Public and Player, by Herbert Reed, New York. Frederick A. Stokes Co.

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work step by step. The place to learn details is in the pages of the book itself. There the reader will discover the true inwardness of the Minnesota shift, the Harvard wheel shift, the Idaho shift, and all the other plays that look so complicated and bewildering on the field. The reader will discover also what happens when a successful forward pass has been made and will learn, perhaps to his surprise, that a blocked kick is seldom the work of one unusually strong, alert player acting by himself. A few of the outstanding elements in Mr. Reed's attitude toward the game must suffice here.

No Apologies to the English Game

First of all, critics of the game should read his paragraphs on the scope of individual initiative. The English game has been compared favorably with our own as giving more play to the individual, our game being condemned as machine-made. Mr. Reed proves that exactly the reverse is the case so far as the fundamental thinking element is concerned. American football is the pure product of individual initiative. Nothing else can account for the rapid changes in style of play, necessitating corresponding changes in the rules to keep pace with it. We started with the English game, but it did not suit us. We have changed it from year to year as new men with new ideas appeared—and there has never been a time when the new idea was not welcome. This is not to quarrel with the English idea.

"Englishmen have the game they want, while we have, in the main, the game we want; the English game is built around a Plan, and woe betide him who takes too many liberties with it, while the American game is a mass of plans and stratagems. There are, of course, basic principles, but they are not the principles of immutable rule and of tradition, but rather the principles that grow out of the sum of many experiences."

So much by way of defense of the American game, if any were needed. As to the play itself, Mr. Reed assumes that the period of violent change and readjustment of the last few years is now over. Henceforth we can look forward to a more normal process of development in which more attention can be given to the fundamentals that have remained practically unchanged throughout.

Two years ago a distinguished English visitor, seeing football for the first time, criticised it on the ground that it bore too close a resemblance to warfare. Mr. Reed frankly acknowledges this resemblance and presses it home. As he says, "The art of football constantly aspires to the condition of warfare," stipulating, however, that this statement is made in an academic spirit. Having due regard for certain fundamental differences between the great game and its more sinister counterpart, he says:

"Even the history of football bears a striking resemblance to the history of warfare. Both, in the beginning, were rooted in individualism; both went through that stage and emerged into the stage known to military men as 'shock action'; and both are to-day largely given over to what is known as 'fire action': in war the long-range use of rifle and field gun, in football the long-range use of the kicking game and the extreme development of the forward pass and individual interference. In both the deadliest arm of the present day was the slowest of development: in war the artillery, in football scientific kicking, handling and covering of kicks. In both the final 'destructive element' has remained the same for a long period: in war the infantry, in football, the line as it blazes the way for the backs."

Mr. Reed's standard of excellence in his analysis of detailed plays is the sound modern one of pace. This is true of every sport, and is approved by the result of practically all international contests in various other sports in recent years. This does not imply mere speed at the expense of accuracy and control. The team that throws the ball around recklessly has small chance to win against the disciplined eleven always playing well within itself and in pursuance of a well-ordered plan. But the safe game that stops content with mere safety will find scoring a difficult problem against an aggressive, chance-taking team of anything like equal caliber.

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An example of this is the work of "Hurry-up" Yost at Michigan. This coach has seen his team drive through to victory repeatedly with plays that came near violating the basic principles of the game. Many of them, in fact, have verged on what Mr. Reed calls the "shoestring" and "brainstorm," a class of play which is rapidly falling into disuse. The play of the future will be rather of the aggressive, charging order, but along definite, predetermined lines that do not exhaust all the resources in a single effort.

Of this type one might cite the secondary defense maintained by Daly and Field, of Yale, against Harvard in 1911, when their vigorous, sustained tackling that met the Harvard attack close behind the line of scrimmage robbed the Crimson of a deserved victory. Then, too, the best ends in the modern game are usually of the slashing, charging type who meet the play well in the opponents' territory, knowing that the tackles and halves may be relied upon to take care of whatever slips by.

As to the football of the future, Mr. Reed sees a steady process of leveling up in coaching methods and standards. The time is passing when a certain type of team and of play may safely be expected from Yale, another from Harvard, still another from Princeton, etc. These teams will still have their individual methods and peculiarities, and, of course, their own backgrounds of tradition and history. But the spreading of football knowledge has gone on rapidly, and each institution and section is drawing more and more from a common storehouse of knowledge. The West is learning defense from the East and the East is learning that the West can teach it something in attack.

The result will be more even games, with fewer freak plays and a greater simplicity in both strategy and tactics. This will put a greater premium on brains and initiative. Mere variations will not succeed solely because they are different. The successful coach will be the one who teaches sound football, with just enough variation to give him the edge over an opposing eleven of practically equal ability. In other words, he must keep a constant footing on the accepted principles with an added blow in reserve for the time of need.

To quote Mr. Reed again, "He will have to figure on just how he would go about fooling himself were he coaching the opposing eleven, and will see his path to innovation through departing from the accepted idea just enough to retain all that is fundamentally sound, while making sure that the variation will not disorganize his own eleven."

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THE DEATH BONE

By E. J. BANFIELD

A Fact Cemented with Fiction

WYLO was an artist, and like all true artists, an artist by grace of God. His family was not in any sense artistic. Of his lineage all had been forgotten, save a few of the many failings of his grandsire. So none could tell whence the talent that burst into blossom with him had sprung. It had not been transmitted. It was spontaneous; it was a gift; and all such gifts—are they not supernatural?

Gaunt old father and withered old mother would tell that Wylo, from earliest boyhood, could always "make 'em good fella along tree"; and now that he was a man and there were the emblems of manhood on his broad chest—deep-cut lines and swelling ridges—and he oft wore his hair long and fuzzy, his hand was very free.

Every morning he traced upon the convenient sand studies vigorous though entirely free from the canons of the schools. No authority existed that could tongue-tie his art. Each steamer, each boat which passed, was sketched offhand, and by some little trick, due to his inspiration, character faithful to the original was imparted. Banana plants in full fruit and slim palms in cluster were oft-times his models; but portraiture was not Wylo's forte. On the bark of trees, on flat rocks, as well as on the shifting sand, he expressed himself plentifully and graphically. He could no more exercise restraint when he found a convenient surface and a piece of charcoal or a lump of soft red stone than he could have recited the Book of Job.

His genius was imperative, almost overbearing. He had been commissioned by an imperious authority to sketch—a fever almost amounting to insanity fired his soul. His work was everywhere, for he had miles of forest and jungle country for his studio, and no hampering, sordid cares to distract him. The light of genius in such an obscure world was unrecognized. Being beyond comprehension, it existed as the coldest commonplace. Not one of his fellows was equipped mentally to register the deviation from the frowsy norm of the camp exemplified in him; and if the camp never produced another artist the default would occasion exactly similar unconcern.

Wylo's masterpiece in portraiture—the one revelation of the human form divine which he permitted himself to accomplish in other than transient sand, was a fancy picture of one of his many sweethearts—a lady in a very old hat and nothing more, with a few boomerangs thrown in to fill otherwise waste space on the inner surface of his shield. Wylo, though strenuous in his love of art, is ever economic of the materials by which that love finds such apt expression. His scenes are crowded.

As a warrior, and as a strategist, not altogether as an artist—though sympathy must ever be with him in that o'ermastering talent of his—Wylo also displayed those gifts which proclaim the gifted, though he was true to his race in many of its phases of simplicity. His skill, or rather his supreme striving to appease æsthetic thrills, made Wylo superb in the fight. He developed a meek, affected voice, somewhat mincing ways, and a faraway look in his eyes. These distinctive traits, worn with careless hair, were so original, so intensely entertaining and notoriety-provoking in a camp which had never possessed the copyright of more than one shabby corroboree, that

A chapter from "My Tropic Isle."

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Wylo made many conquests. For each conquest of the heart he had fought, and the more frequent his fights the more expert and daring he became. Thus did love indirectly raise him eventually to the dignified position of king.

Never before had any man of the camp so many fights on his hands. The artistic instinct caused him to fashion weapons true and perfectly balanced, made his hand the steadier and his aim very sure, while his intense earnestness in love imparted terrific speed to his blows when he beat down his rival's shield with his great short-handled wooden sword. He was enthusiastic as a duellist as he was absorbed in art. It came to pass that when Wylo was not tracing his favorite seascape he was either flirting or engaged in the squally pastime of fighting an aggrieved husband or scandalized lover.

Wylo had so many of the fair sex to do his bidding that he was relieved of the necessity of troubling himself about food. Frequently, as all manly men do (civilized as well as savage), he longed for the passion of the chase; and then he fished or harpooned turtle or hunted wallabies with spear and nullanulla, or cut "bees' nests" from hollow trees, when his face would become distorted by stings and his "bingey" distended with choice honey; and he would without patronage bestow upon gratified female friends old or brood comb.

Wylo was a man and a king among his fellows, tall, white-toothed, generally decorated with a section of slender yellow reed through the septum of his broad-base nose, and with a broad necklace of yellow glass beads round his neck. He wore clothes sometimes, as a concession to the indecent perceptions of the whites (whom for the most part he despised); though he preferred to be otherwise, for he was a fine figure—not a plaster saint by any means, but a hero in his way and well set up, and an artist by Divine Right.

Handsome, then, of build and limb, if not of feature, the ideal of every female of the camp, a successful warrior, a true sportsman, was it any marvel that Wylo suffered gladly that pardonable transgression of genius — vanity? He oft wore nothing but a couple of white cockatoo feathers stuck in his hair. Thus arrayed, he was audaciously irresistible, and provoked the enmity of the crowd. As an artist Wylo was an all-round favorite; but as a dandy all but the women —and he was disdainful of the good-will of the men—despised while they panted with envy and made grossly impolite references to him.

Now, the sarcastic jibes of a black fellow are not translatable, or rather not to be printed beyond the margin of strictly scientific works. Courageously free and personal, they would be beyond comprehension in these chaste pages. Why, therefore, attempt to repeat them? A genius has been described as a deviation from the average of humanity. This definition exactly suited Wylo, for it was discovered when jibes were flashing about that he was positively inspired. They were as sharp as his spears, as stunning as his sword.

Yan-coo, the wit of the tribe, a stubby, grim old man, who spent most of his time making dilly-bags and modelling grotesque debils-debils in a pliant blending of bees' wax and loam, to the horror of every piccaninny, soon found that Wylo could talk back with such withering effect, such shatteringly gross personalities that he, who with the spiteful ironies of his venomous tongue had kept the camp in awe, was dazed to gloomy silence by Wylo's vivid flashes of wit. His weird models showed a mind corroding with vicious intent. He dared not open his lips while Wylo was about. The quaking piccaninnies cringed with fear as they watched him working up his malignant feelings into the most awful imps —imps which threatened violence to their souls.

Wylo was supreme. He gloried in his dandyism, and in his skill as a fighter. His genius basked in the sunshine as he made high reliefs in the sand or charcoaled pictures on the cool, gray rocks hidden in the sound-sopping jungle. The one weak spot in his character was his faith in a sort of wizardry. Contemptuous alike of the open violence or stratagems of his fellows, he had the utmost horror of an implement which Yan-coo, who was medicine-man as well as char-

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tered wit, reserved for use against mortal enemies.

This terrible tool he had never seen. Very few had, or even wanted to, for its effects were as incomprehensible as they were tragic. Never employed in the exercise of private or individual malice, the death bone was an unfathomable and awful mystery. So dire was its influence that if a woman touched it, or even looked at it, she sickened.

What was this instrument of death?

A human bone scraped and rubbed to a gradually tapering point, to the thick, knobby end of which a string of human hair, plaited, was cemented, the other end, of a length of several yards, being similarly cemented to the interior of a hollow bone, also human. When the stiletto-shaped bone is directed toward an individual who has incurred the enmity of the medicine-man his best heart's blood is attracted. Drawn from the throbbing organ, it travels along the string and into the hollow receptacle. The pointer is then sheathed and sealed with gum blended with human blood, the string being wound about it. Simultaneously with the extraction of the victim's most precious blood by this subtle and secret process, a pebble or chip of shell is lodged in his body, with the result of ensuing agony.

Unaware of these very dreadful happenings, the individual so operated upon may not suffer immediately any ill effect. The wizard watches, and if no untoward symptoms are exhibited he takes into his confidence a friend, and this candid friend tells the afflicted one that he must be ill and dying, for the death bone has been pointed at him and has done its worst. Fear begets immediate sickness, and if the blood of the patient be not restored and the foreign substance extracted from his spasmodic side with elaborate ritual, death is inevitable.

Ridicule is but a slight shaft to employ against any one who may retaliate with so potent a weapon as the death bone. In the fulness of his vanity and wit, Wylo began to make gratuitous fun of Yan-coo, who fretted and fumed and terrified the piccaninnies with still more hideous debils-debils. I saw one of them. It resembled a span-long plesiosaurus, afflicted with elephantiasis, and a forked, lolling tongue extruded from a head that swayed ominously right and left. A tipsy, disorderly, vindictive debil-debil it was, that made the boldest piccaninny shriek with dismay. Wylo, with a tiny spear of grass, knocked the head of the atrocious debil-debil off, and the piccaninnies changed shrieks for smiles.

That charitable feat sealed his fate. It was the beginning of a duel between wizardry and art.

At night Yan-coo, mute with vengeance, left the camp for the secret hollow in a mass of granite which held the implements and elements of his craft. While Wylo slumbered and slept the malicious sorcerer directed with every atom of fervor he possessed the grisly death bone toward him from the distance of half a mile. The influence of the death bone is so completely under the control of the operator that it usually goes straight to the person against whom he, in the dead waste of the night, breathes his moody and angry soul away. Should the medicine-man, however, be conscious that the potency is inclined to swerve, if he but put his hand to the right or left it must fly in accordance with his will.

Perfectly unconscious of the dastard trick played upon him, Wylo continued for several days to flirt and fight. He had a glorious time, and so, too, had the piccaninnies, for Yan-coo, for reputation's sake, dared not model debils-debils merely to have their horrible heads knocked off with irreverent grass darts. Rather have no debil-debil than one subject to Wylo's profane but splendid marksmanship. So the naked, black kiddies danced about Wylo, while Yan-coo fortified himself with the grim knowledge that he had Wylo's heart's blood securely sealed up, and that Wylo had a pebble in his body which would make him squirm sooner or later.

But, strange though it was, nothing happened to the arrogant Wylo. His physical condition was perfect, his spirits boisterous. The skill of the medicine-man, the whole dread influence of the death bone, were at issue, and to give effect to both Yan-coo whispered that he had employed the death bone against

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Wylo because Wylo had become too "flash."

The recital of the deed struck horror and dismay into Yan-coo's confidant. He was shocked at the sacrilege, astounded that Wylo had not yet "tumbled down." It was his duty to tell poor Wylo of his awful fate.

Individuals of other nationalities in all ages have been proof, as Wylo was, against unimagined evils.

"There may be in the cup
A spider steep'd, and one may drink, depart,
And yet partake no venom; for his knowledge
Is not infected; but if one present
The abhor'd ingredient, make known
How he hath drunk, he cracks his gorge, his sides
With violent hefts."

"His knowledge infected," Wylo collapsed forthwith in a spasm of fright. All the prognostics of the medicine-man were verified. Wylo's hair became lank, his eyes dull, his teeth yellow, his face pinched, his limbs weak. He spat frequently and groaned. He pined daily, for he slept little and his appetite was gone. Knowing that the fatal death bone had been pointed at him, what was the use of attempting to resist inevitable fate? Rather would he resistlessly meet it. How was it possible to live without his precious blood, now sealed up in the death bone? And he had a horrible pain in his side where the stone was—just as Yan-coo had said.

All the camp knew what had happened. Yan-coo's reputation had been grimly asserted. Everyone now dreaded him anew. Again he was king. Though it was contrary to all precedent to point the death bone at a member of the tribe, yet had Yan-coo made a law unto himself and his own justification, and the proudest testimonial to his skill was Wylo's deplorable condition.

Wylo became thinner and weaker every day, for Yan-coo, seething with malignity, stood aloof, declining to interfere. To him Wylo's gibes had been more cruel than the grave, for they had had the grace of originality, and once and forever he purposed to shake his authority and dreaded powers over the heads of the affrighted camp.

The death bone was slowly but implacably doing its office.

Among Wylo's many sweethearts was one who, in early youth, had been kidnapped from a distant camp. She it was who took the news of Wylo's direful sickness there and implored the aid of a rival medicine-man. Glad of the chance of exhibiting his knowledge and skill in a case which was notorious and to outsiders absolutely hopeless, he followed the girl.

After making no doubt whatever that Wylo's blood had been abstracted, that an angry stone was lodged in his side, and that death was imminent unless prompt measures were taken, the strange medicine-man chanted long and weirdly. He squeezed and pummeled Wylo and made tragic passes with his hands over his body and limbs. Then suddenly he applied his lips to Wylo's sore side, and, after loudly sucking, exhibited between them an angular piece of quartz which he triumphantly declared he had drawn from his patient's body. Everybody, including Wylo, believed him.

Wylo brightened up at once. The two medical men, whose interests were common—for the profession is very close and regardful of its rights and privileges—consulted, communication by signs and gibberish not understanded of the people. Accompanied by a few of the elders of the camp, they went to Yan-coo's surgery, took out the death bone, and with much ceremony unsealed it.

Blood stained the interior! All could see that it was Wylo's blood. It could be none other, for none but Wylo had been deprived of any. Ostentatiously the medicine-men washed the death bone clean, restored it to its unholy nook, and returned solemnly to the camp.

After deliberate and impressive silence it was announced by moody Yan-coo that Wylo's heart's blood had been restored, whereupon that hero rose to his feet, sound and well, though lean.

No word of anger or complaint passed Wylo's lips the while he regained normal strength and gaiety. With frank ardor he resumed his sketchings and flirting with old-time success. He actually modeled the grossest of debils-debils for the piccaninnies and impaled all the vital

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parts with grass darts, while the piccaninnies broke into open jeers at Yan-coo, for the spell had been destroyed.

Such outrages upon the craft of the sorcerer could not be tolerated. But Wylo watched Yan-coo, and one night as he strolled out of the camp Wylo followed with that light-footed caution and alertness significant of his artistic perceptions. Wylo carried a great black-palm spear fitted into a wommera with milk-white ovals of shells at the grip.

Yan-coo went straight to his surgery. Once more he prepared the death bone. Every detail of the unholy rite was performed with determination, for he had abandoned all remorse.

As he pointed the death bone toward the camp where, as he supposed, Wylo rested, that hero cast his spear. He was strong. He had the sure eye of the artist, the vigorous hate of a black.

When they found Yan-coo next morning he was still kneeling on one knee, for the polished spear had impaled him, and, sticking six inches into the ground before him, kept him from falling. With his chin on his left shoulder and his right hand still retaining the string of the death bone, he had died as unconscious of the hand of the artist as the artist had been primarily of his wizardry.

White folks heard of the "murder." Wylo was apprehended and put on trial. The solemn and upright judge could not learn the true facts of the case, since the witnesses were incapable of intelligently stating them. Wylo, who had promptly confessed to the crime in the terms, "Me bin kill 'em that fella one time—finish," but who was denied the right of explaining that Yan-coo had been prosecuting designs against his life quite as effectual as a spear, and that Yan-coo had been "justifiably killed," was sent to jail for several years.

Constraint was dreadful to him, and the sorest trial which he endured was the suppression of artistic longings; but he made pictures, he tells me, everywhere —"alonga wind, alonga cloud altogether, alonga water, alonga dirt, alonga stone." They were mostly imaginative, but to his mind, in a fine frenzy rolling, they were soothing and real. He made pictures out of airy nothing and gloated over them with his mind's eye. No power other than that which had bestowed the breath of life could subdue the beneficent mania that exalted his soul.

Wylo is at the camp, sketching, flirting, and modeling fearsome debils-debils for a new generation of hilarious piccaninnies.

WHAT MAKES BASEBALL POPULAR?

Two Letters Which Discuss the Problem from the Standpoint of Manager and of Critic

IN his article on "Brains in Baseball," in the September OUTING, Mr. Mack Whelan raised the question of the intrinsic elements which make for the popularity and success of professional baseball. This has elicited a reply from Mr. John B. Foster, secretary of the New York Baseball Club. Because we believe the question an important one, not only for baseball but for other sports which make any claim for public approval and interest, we have obtained Mr. Foster's permission to print his letter, together with a brief reply from Mr. Whelan. The letters follow:

To the Editor of OUTING:

I was much interested in reading an article in your magazine by Mr. Mack Whelan entitled "Brains in Baseball." It was ingeniously put together, but from twenty-five years' observation in baseball

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I am inclined to differ absolutely with Mr. Whelan's deductions. If I understood him correctly he believes that the greater attraction to baseball is mental effort, and not what is generally known as sport. I think he is entirely wrong. Some of the wisest moves made by baseball managers never were grasped or even understood by the public. Some of their most stupid blunders were overlooked by the public, because the public did not look at it from the same standpoint as the manager.

One does not necessarily have to participate in a sport to enjoy it. Twenty thousand spectators go to a race-track, yet of the twenty thousand, nineteen thousand nine hundred and ninety never were jockeys nor ever expect to be. The twenty thousand like racing because they are fond of the horse. Perhaps fifty per cent. of them at some time rode horseback and enjoyed it. Any boy who has ridden horse-back knows the exhilaration in speeding a horse.

Over eighty per cent of those who attend ball games at some time have played baseball. This has been proved by careful observation at different periods for a term of years. Of the other twenty per cent. less than five are attracted by speculative interest, and the remainder can be classed among those who follow the crowd, whether to baseball or a barbecue. A tennis championship, a golf championship, in fact almost any championship, will attract a crowd. Of the sixty thousand who see a football game not ten thousand ever had a football in their hands in their lives. Yet the sixty thousand certainly enjoy the sport, if outward approbation is any criterion. The wisest move that the wisest manager ever made in his life will be forgotten in twenty-four hours, while a home run with the bases filled will live a life-time in the mind of any baseball enthusiast. That is one of the most convincing proofs that baseball is not mental science but physical skill. In other words, sport.

A game was won one day this season by Manager McGraw simply because he made a batter change his position from the left side of the home plate to the right. There was not a spectator in the crowd of several thousand who had the slightest notion of what had taken place from the managerial bench, and some of them jeered the batter for shifting about after two strikes had been called against him. Of the group of baseball critics who saw the game, only one realized the significance of the move.

I doubt if there was a single person among the thirty thousand odd spectators at a World Series game who noted that Connie Mack lost a contest for his team by making a blunder in shifting an outfielder. He pulled the outfielder in, and Crandall, who was at bat, promptly knocked the ball over the outfielder's head and won the contest for New York. The fact that Mack made this move did not appeal to the crowd at all. They knew nothing of the mistake in brains, but they saw the terrific hit that Crandall made over the outfielder's head, cheered themselves hoarse, and talked about Crandall all night. That is essentially sport, not mental science.

I might cite you a hundred cases wherein managers had blundered and erred, and only perhaps a half dozen were the wiser for it. It would be just as possible to cite cases where managers executed brilliant strategy which won for them, but the public was none the wiser for that. It sees baseball as a contest in which there is a great element of luck, and it readily recognizes the fact that the men who are most expert physically are likely to win in physical tests as against those who have a superabundance of brains but are short on muscular tissue.

Some of the greatest baseball players who have ever lived were not what would be called mentally keen men. Yet in baseball they were towers of strength, and as great factors in winning championships as any man with tremendous mental force and energy. Some of the smartest, most clever, most brilliant and most sagacious managers who ever lived never won a baseball championship. They were unable to gather a combination of physical energy with the requisite team strength to carry them successfully through the season.

Go through all the history of baseball such as becomes an organization to strive for a championship on a clean, fair, and

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honest basis, and you will find that the achievements remembered by the average baseball enthusiast are not those of the mind but those which resulted on the field. No manager can make baseball so perfect from the standpoint of chess, that a home run with three men on bases will not upset all calculations of playing directors, and a home run with three men on bases is twenty-five per cent. skill and seventy-five per cent. bull-headed luck. That is what constitutes sport.

Sincerely yours,

JOHN B. FOSTER.

To the Editor of OUTING:

Mr. Foster says: "Some of the wisest moves made by baseball managers never were grasped or even understood by the public."

Certainly the general trend of "Brains in Baseball" made it clear that the writer is not of the opinion that the majority of the attendance at a big league baseball game is critical. The critical minority enjoys such plays as Mr. Foster instances in the case of Connie Mack and such similar expositions of gray matter as those credited to Hal Chase, Keeler, and Griffith in "Brains in Baseball."

The point is that the number of close students of the game is growing. In the opinion of the writer the great commercial structure which has been built up on baseball enthusiasm must ultimately stand or fall upon its power to hold public interest on this count. The test is in the future, but it is coming, nevertheless.

The rest is simply the result of a difference in point of view.

Mr. Foster says: "Twenty thousand spectators go to a race-track, yet of the twenty thousand, nineteen thousand nine hundred and ninety never were jockeys nor ever expect to be."

Perhaps this observation sums up the whole discussion. The nineteen thousand nine hundred and ninety go to the race-track, not to see the jockeys, but to see the horses. And racing is the highest form of sport for horses. It remains for the individual to decide whether professional baseball is the highest type of sport for men.

Sincerely yours,

MACK WHELAN.

What Ails England? Our English friends seem to be afflicted with another attack of morbid depression. The defeat of their polo team was the first blow of the present year. The loss of the Davis Cup was expected but not encouraging. Then came the victory of Mr. Ouimet at Brookline over two of their best, Harry Vardon and Edward Ray. This was the crushing blow apparently. "Humiliating," "incredible," "discouraging," are some of the terms applied by the English press to this latest reverse. The old bogey of athletic decadence rears his head in their midst, and there seems a desperate agreement that "something must be done." Just what that something is does not seem so clear. Perhaps our friends and kinsmen across the water will pardon a few good-natured suggestions. In the first place, gentlemen, keep your heads. This remark is addressed mainly to the English press and the sporting writers of the Kingdom. The great mass of English sporting sentiment is sound and unhysterical. But the

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press can make a heap of noise and by-and-by create a considerable body of sentiment and opinion. Therefore keep cool and have a careful regard to the facts in the case.

Case Not So Bad

England has not done so badly after all. To be sure, America has won the majority of the victories, but we knew that we were playing and there were no walk-overs. The polo match was the nearest of near things, and could have gone the other way without great reversal of form on either side. In tennis McLoughlin lost his two hardest matches in England—to Wilding and Parke—and Williams was forced to bow to Dixon in the Davis Cup finals. As for the golf, to be sure that was surprising to Americans no less than to Englishmen. But there was nothing flukey about it. It was sterling golf that won, and that after all, is the main consideration. Vardon and Ray played well—perhaps not so well as at some other times, but still well enough to have won nine out of ten times. Consider the scores of Mr. Ouimet; an average of barely over seventy-five for seven rounds on a course with a par of seventy-three, and under conditions that make par golf little short of the miraculous. This was winning golf, and there is no occasion for explanations or repining. The best man in the world sooner or later meets a better. If he did not, sport would soon lose its zest and there would be no incentive left for improvement. The man who couldn't lose would have little real excuse for staying in the game.

Winning Golf at That

Continuing the subject, Vardon and Ray have little reason for thinking their tour a failure despite their defeat in the great contest. They have met the best professionals that this country affords, and down to the present writing, with two exceptions, have beaten them decisively. The first defeat—at Shawnee—came soon after their arrival, when they had had little time to become adjusted to the new conditions. The other, by the Smith brothers, followed close on the heels of the open championship, when the visitors were still under the strain of that hard fight. Now, seriously, why should anyone apologize for this? No one can win all the time. Even Roosevelt loses occasionally. Summing up the whole situation in international sport, the contests have all been close and have looked like anyone's race right down to the finish. To be sure, we have the lion's share of the laurels, but what of that? A good fight is always worth while, and the best that any of us can ask is a fair chance and a good run for our money.

Explanations Useless

But what shall we say of the habit of explanation that seems to be growing among our English brethren? Here is a sample from Taylor, the professional golfer, seeking to find a reason for Mr. Ouimet's victory: "Youth has no nerves. Youngsters playing golf do not realize how difficult it is to play really well. Only when one has made a reputation and understands the dire consequences of failure is one properly thankful if one is playing well. Ouimet is a splendid golfer, endowed with splendid nerves. At the same time my impression is that he had everything to gain and nothing to lose. Vardon and Ray, on the other hand, knew they carried on their shoulders the golf reputation of this country. That did not make their task easier. It is much more easy to make a reputation at golf than to maintain it." Now what does this really prove? Why, just nothing at all. Whatever advantage the youngster may have had in one respect was more than counterbalanced by his opponents' age and vastly greater tournament experience. It was their business to play well. The not uncommon argument that the crowd disturbed the Englishmen has been advanced as also the plea that the playing of the tie in a three-ball match handicapped them. These statements are not cited here for purposes of serious rebuttal. They carry their own answer on their face. Vardon and Ray have been playing before crowds all their lives, much more, even, than our own professionals. In England a professional match attracts far more attention than in this country. The three-

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ball match at the finish was as fair for one as for the other. No, no, gentlemen, it is idle to waste time in explanations. We know, for we have done our share of it in our time. The real reason for defeat is usually that the other fellow played better, which is quite as it should be.

A Question of Ideals

The latest news from the other side is that England is contemplating withdrawal from the Olympic games after the meeting at Berlin. It is difficult to discriminate here between serious intention and mere idle talk. If sober Englishmen really intend such a serious step their athletic house is in sad need of a thorough cleaning. The argument seems to run about as follows: Englishmen play for love of the sport; Americans play to win; therefore Englishmen will not play with Americans. The trouble with this syllogism is that both hypotheses are less than half true. Speaking from some slight observation, we can say that Englishmen are quite as keen on winning in anything they undertake as are Americans. Neither is it true that Americans play solely to win. The victory is the acid test of excellence; but by far the great majority of Americans are quite as sincere in their love of sport for its own sake as are their brethren over the water. But to adopt for the moment the English argument, assuming that the press speaks for a large body of responsible readers, there is a serious break between hypothesis and conclusion. If Englishmen play only for love of the sport, why weep over defeat? The sport still remains.

American "Professionalism"

The obvious English answer is that Americans are professionals and use methods to which an Englishman will not stoop. So well-informed an authority as Guy Nickalls, the English oarsman, declared recently he "had heard it said 'that elbows played as large a part as did legs in the American victories at Stockholm.'" This is a serious charge, and should not be made unless it can be well supported. To cite such mere hearsay evidence is not complimentary to Mr. Nickalls' sense of fairness. The races were run, not under American but under Swedish rules, and to accuse the Americans of unfair tactics is to accuse the officials of incompetence or connivance. As to the other charge of professionalism in organization, there seems to be a large ignorance in England as to the way to which sports are actually conducted in this country. There is commercialism in this country, but it is not where foreign critics think it is, and its effect is actually to hamper rather than assist the individual athlete. The individual trains entirely under the direction of his local club or association or college, and without assistance or advice from the A. A. U. Of the money raised for the Stockholm meeting not a penny, so far as we can discover, went to the assistance of athletes save in transporting them to Stockholm and caring for them while there. The English proposal to raise $500,000, a large part of which is to be distributed among local organizations to pay for the expenses of trainers, etc., is without a parallel in this country. If it were attempted it would probably fail as completely as it seems to be likely to do in England.

England's Splendid Isolation

Perhaps England is on the down grade in athletics. We can hardly judge at this distance. But the odds are against it. There are periods of depression from time to time in all countries, what baseball men call a slump. We have experienced it in tennis, in golf, in football, in athletics generally. But the rally comes in due time if the spirit of the nation is sound. There is no occasion yet for despair. Here in America we are coming more and more to a sane realization of the proper part that sport plays in life. We have had our panics and may have them again, but to-day our sense of values in this respect is better than ever before. Success has clarified rather than confused our vision. If sport is not to make our young men sounder, cleaner, healthier, more useful in the world, we shall soon know the reason and apply the remedy if there is one. This is not to boast; not to know this would be to despair of the future of any sport-loving nation. American sport to-day,

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better than ever before, represents the sound, thinking, hopeful spirit of the country. International contests are inevitable in the nature of the case, but they are only the final flowering of athletic growth. We can get along without them, but we will not. If we do not meet England in friendly tests of strength and skill, then it will be some other nation that will face us, and England alone will suffer from her policy of athletic isolation.

A Rosy Football Sky With all due allowance for the dangers of prophecy, there is good reason to believe that this year will be one of the most interesting football seasons in recent history. The rules remain practically unchanged, and we have had a full season in which to adjust our playing methods to them. If one can judge from the few games that have been played when these lines were written, the game of the year is to be of the simple, fast-running, hard-driving type. Yale is saying nothing and working hard. The defeat of Wesleyan, although accompanied by much crude playing in matters of detail, showed a growing mastery of the fundamentals of the play not seen at New Haven so early in the season for two or three years. Yale usually needs little advice in defense, but for some time their attack has been uncertain and the generalship very much of an in-and-out order. These are not the faults that are apparent in the 1913 candidates. The material is of a uniformly rangy class of medium weight, with plenty of speed. Little news comes out of Harvard so early, but what we have indicates that their play will differ little from that of last year. Princeton is trying an experiment in coaching that may result well or ill, but which seems to be taking a rather long chance. At Cornell conditions seem better than for many years. The first game resulted in a victory so decisive that it can hardly be attributed entirely to weakness on the part of the opponents. Mr. Sharpe is one of the best types of coaches, and nothing but poor material or lack of support on the part of the college can bar the road to radical improvement over the work of previous years. From the West comes news that Chicago has better than average material in the line, and that Minnesota is rejoicing over the return of many of the old men who were the reliables of last year. This is all good news and gives promise of leveling up of play in all sections of the country. The simplifying of tactics will lessen the liability to fluky victories and place the emphasis on sheer excellence of performance.

With Only One Arm "I could beat you with one hand" is a good-natured taunt occasionally heard around golf clubs. It is a boast that could be made with entire good faith by Louis Martucci, of the Essex County Country Club over in Jersey. Louis is a caddy, and in a recent caddies' tournament turned in cards of 73 and 72 for his two rounds on the first day of play. The par for the course is not reported, but it is close to those figures, if not above them. Our hats are off to Louis for his gameness in overcoming a handicap that would seem to be insuperable. Golfers with the usual number of arms could well take pattern from his courage.

Foot Faults in Tennis Tennis players are mildly agitated over the question of foot faults. As usual, the first suggestion is a change in the rules. Over in England there is a proposal to require the server to keep both feet on the ground until after hitting the ball. We have heard nothing specific in the way of suggestions in this country, so we make bold to offer one of our own. That is, enforce the rules as they are now and see what will happen. The calling of foot faults is a perfunctory matter in most tournaments unless the offense be so flagrant that it cannot help but be seen. But the rule is fairly precise on this point. Here is what it says: "The server shall serve with both feet behind, i.e., further from the net than the base line. . . . It is not a fault if one only of the server's feet do not touch the ground at the moment at which the service is delivered. He shall place both feet upon the ground immediately before serving, and shall not take a running nor a

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walking start." This might be made a little clearer or more elegant, but its meaning is fairly evident. The server is expected to stay behind the base-line until after the delivery of the service. This does not mean partly behind, with one foot over the line or in the air nearer the net than the base-line. The rest of it is up to the man watching the line. This is one rule that is probably more violated than any other in tennis, except, perhaps, the one requiring a ball to strike the ground outside the court before it can be called out. As a matter of fact the man stopping a ball on the volley, even though he is standing behind the base-line and the ball is over his head, is committing a fault and giving a point to his opponent. In tennis, as in most other sports, we have rules enough and to spare. All that is needed is a little whole-hearted enforcement.

All Set for the Cup Races The conditions governing the *America's* Cup races for next year have finally been determined and announced. In the matter of size of defending boat the result is a complete victory for the New York Yacht Club in that the Royal Ulster accedes to their refusal to specify measurements in advance. This, of course, is purely a matter of form, as the defenders could hardly enter a boat materially in excess of the challenger, viz., seventy-five on the load waterline. Nothing definite is known about any of the arrangements that are being made for the building of a defender further than that the Herreshoffs have apparently received an order, it is rumored two orders. One report named a seventy-five-footer with fifteen thousand square feet of sail. This is quite unlikely in view of the fact that this is hardly more than a thousand feet less than the ninety-footers carried. Eleven thousand square feet is probably nearer the exact dimensions. The course will be the usual one of thirty miles from the Ambrose Channel lightship, alternating between windward and return and triangular courses on succeeding days. The time limit has been placed at six hours, and a stipulation for postponement in case of fog has been made. In case of serious accident to either boat before the preparatory signal, reasonable time shall be allowed for repairs, but this shall not exceed four weeks. An unfinished race shall be repeated on the same terms—that is, to windward and return or over the triangular course, as the case may be, until it is finished. These, in broad terms, are the working arrangements for the race. All measurements are to be taken according to the New York Yacht Club rules, with a few exceptions which are inconsistent with the special rules governing these races. Now there remains but to build the boats and sail them, a very simple problem as compared with the negotiations, apparently.

Man and His Caddy Out in Chicago the Exmoor Country Club has set a good example by arousing its members to the responsibility they have toward their caddies. They have even issued a little booklet which contains some sound advice on the subject. As the Exmoor men analyze the relationship it is not that of employer to employed or that of servitor to the served. It is that of man to boy. The booklet epitomizes the matter thus: "Player conduct is safe when it is toward the caddie what it would be toward a son of like age." This statement must, of course, be accepted with a few reservations, but it is pretty safe ground at that. If all the players realize the full meaning of this phrase in dignity, self-possession and kindness there will be fewer criticisms of caddy service and better boys to do the caddying.

Longevity of Rifles A question that is often asked is as to the proper length of life of a rifle. The ordnance officers of the United States Army have declared that the present service arm should have a period of usefulness of at least ten years. This, of course, is conditioned on good care and the amount of use during that period. It is doubtful if many guns would even remotely approach such longevity under actual service conditions where opportunities for cleaning the piece were irregular and far between. On the other hand, the ordinary sportsman with his two or three weeks a year in the woods should

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much exceed it. Modern high-power powder demands constant vigilance to prevent the corroding effect of the acid reaction that is set up in the barrel at the discharge. This appears to be heightened by the heating of the barrel by rapid use for a number of shots. The same number fired at long intervals would present much less difficulty. The ordnance officers specify eight to thirteen thousand rounds as the capacity of the Springfield before its accuracy should be impaired. This is a fairer test than mere length of time. In the old days of the pioneer rifle, handed down from father to son, there was little thought of loss of accuracy. The gun was expected to shoot as long as it held together. But there was no nitro powder then and the number of shots fired was relatively few. The backwoodsman was not prone to waste shots. Ammunition was an important factor with him and when he fired he expected his game to drop with a single shot. If it did not it was a case of a lost animal and a possible shortage in the larder. In consequence he waited until he had the range he wanted to make it sure.

Sale of a Great Stable An echo of the old days was heard at Madison Square Garden early this fall when the remnants of the racing stable of the late James R. Keene were sold at public auction. There was Peter Pan, son of the great Commando, and himself a winner and sire of winners, and Colin, the unbeaten, and winner of nearly two hundred thousand dollars in stake-money. The former went to Harry Payne Whitney for $38,000, while Colin brought only $30,000. A few years ago these would have been picayune prices for such stars of the turf. Double the money and more would have been freely offered for either of them. Probably as well could have been done with them in the foreign market at the present time, but we should be thankful, however, that a few of the great thoroughbreds are still remaining with us.

NEWS OF THE OUTDOOR WORLD

Golf and Tennis

FOR the fourth time in his golfing career Jerome D. Travers, Upper Montclair, N. J., won the National Amateur golf championship in the tournament at Garden City, L. I., September 2-6, defeating John G. Anderson, Brae Burn, 5 and 4. The medal in the qualifying round was won by Charles W. Evans, Jr., Edgewater, with a score of 148 for the thirty-six holes. Mr. Evans's score on the second day's round was 71, three better than par, the second nine being played in four under par. Mr. Travers, the winner of the tournament, barely squeezed through the qualifying rounds, being one of thirteen to play off at 165 for the last twelve places.

Yale won the intercollegiate team golf championship for the ninth consecutive time, defeating Williams in the final play by six matches to three. The individual championship was won by Nathaniel Wheeler, Yale, who defeated John Marshall, Jr., Williams, 3 and 2 in the final. Mr. Wheeler was quarter-back on the Yale football team last year.

Francis Ouimet, Woodlawn, Mass., won the National Open Golf Championship at Brookline, Mass., September 21, defeating Edward Ray, Oxhey, England, and Harry Vardon, South Herts, England, in a triple tie for first place. Mr. Ouimet's score for the seven rounds, including the qualifying round and the playoff, was 528, an average of 75 3/7 for each round; Harry Vardon, 532, an average of 76; Edward Ray, 530, an average of 75 5/7. This is the first time that this event has been won in this country by an amateur, and only two amateurs, John Ball and Harold H. Hilton, have accomplished the feat in England.

Massachusetts won the Lesley tri-state golf cup, defeating the Pennsylvania team in the finals by 5 to nothing in the foursomes and 7 to 3 in the twosomes. The event of the last day's play was the defeat of Francis Ouimet, open champion, by R. S. Worthington, Shawnee, Pa., one up.

Harvard won the intercollegiate tennis championship at Philadelphia, all the players in the finals of both doubles and singles be-

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ing Harvard men. The singles championship was won by R. Norris Williams, of the Davis Cup team, who defeated W. M. Washburn in the finals 6—4, 3—6, 6—4, 6—1. The doubles title went to W. M. Washburn and J. J. Armstrong by a score of 4—6, 4—6, 7—5, 9—7, 6—2.

Chas. O. Benton, of Cleveland, won the Ohio State Tennis championship in singles, defeating A. F. Reed in the finals 6—0, 6—6, 6—3.

Sailing and Motor Boating

THE German challengers for the President Wilson and Governor Foss cups in the sonder boat races off Marblehead failed to win a single event, none but American boats figuring in the finals. The order of the finishes was as follows: First day—*Cima* (Guy Lowell, owner), *Sprig* (J. L. Saltonstall, owner), *Ellen* (C. P. Curtis, owner). Second day—*Ellen, Cima, Sprig.* Third day—*Sprig, Ellen, Cima.* Fourth day—*Ellen, Cima, Sprig.* In the final races the President Wilson cup for best score during the series was won by the *Ellen,* and the Governor Foss cup for second place went to the *Cima.*

In the international motor-boat races for the Harmsworth trophy in Osborne Bay, Isle of Wight, England, the prize fell to the English boat *Maple Leaf IV,* owned by E. Mackay Edgar, representing the Royal Motor Yacht Club. The *Maple Leaf* won the second and third races, the first being won by the French boat *Desperjons II.* The best time for the course of 32.4 miles was made by *Maple Leaf* on the second day, 39 mins. 28⅜ secs.

The Manhasset Cup, won by the Chicago Yacht Club's Class P sloop *Michicago* last year, on Long Island Sound, was successfully defended by the *Michicago* this year against the *South Shore, Olympian, Stranger,* and *Mavourneen.* All the contending boats, with the exception of the *Stranger,* hailed from Chicago. The *Stranger* challenged from the Rhode Island Yacht Club.

Miscellaneous

THE Palma trophy for riflemen was won by the United States team at Camp Perry, O., with a score of 1,714, Argentine being second with 1,684, Canada following with 1,675, Sweden with 1,494, and Peru with 1,465. The Argentine-American naval trophy was won by Argentine with a score of 1,612 against the American score of 1,490. Delegates to the Pan-American Union decided to hold the next shoot at Lima, Peru.

A new world's record at the 500-yard range was made by Capt. W. H. Richards, of Ohio, at Sea Girt, N. J., Sept. 15, when he scored twenty-three bull's-eyes on a 16-inch target, without a miss. Two days later he set up a new mark of 74 out of a possible 75 at the 1,200-yard range. On the same day the District of Columbia team made a new record in the team match at 200 yards with 395 out of a possible 400, shooting at 7-inch bull's-eyes.

Howard Drew equaled the world's record of 9⅘ seconds for the hundred-yard dash at Hartford, Conn., September 1.

Ernest Guillaux, a French aviator, covered 118 miles in fifty minutes, carrying a passenger, from Savigny-sur-Braye to Paris.

Maurice Prevost won the International Aviation Cup for France by flying the 124.28 miles required in the record time of 59 mins. 45⅜ secs. The machine used was a Deperdussin monoplane. The highest speed for a single circuit of the course was at the rate of 2 1/10 miles a minute.

Football games played during September resulted as follows: Yale 21, Wesleyan 0; Yale 10, Holy Cross 0; Harvard 34, University of Maine 0; Cornell 41, Ursinus 0; Cornell 0, Colgate 0; Princeton 14, Rutgers 3; Pennsylvania 53, Gettysburg 0; Carlisle 25, West Va. Wesleyan 0; Amherst 10, R. I. State College 0; Dartmouth 13, Mass. Aggies 3; Syracuse 41, Hobart 0; Lafayette 7, Muhlenberg 7; Lehigh 64, Albright 0; Bowdoin 17, New Hampshire State 0; Williams 14, Rensselaer 0; Colby 10, Brown 0; Minnesota 14, South Dakota 0; Oberlin 45, Heidelberg 0; Ames 6, Grinnell 0; Virginia 40, Randolph-Macon 0; Indiana 48, Depauw 3; North Carolina 7, Wake Forest 4.

The quarter-mile national swimming championship was won by James C. Wheatley, unattached, in the good time of 6:04⅘. The record of 25⅙ secs. for the 50-yard swim was equalled by A. C. Raithel, of the Illinois A. C., in the Launch Club races at Buffalo.

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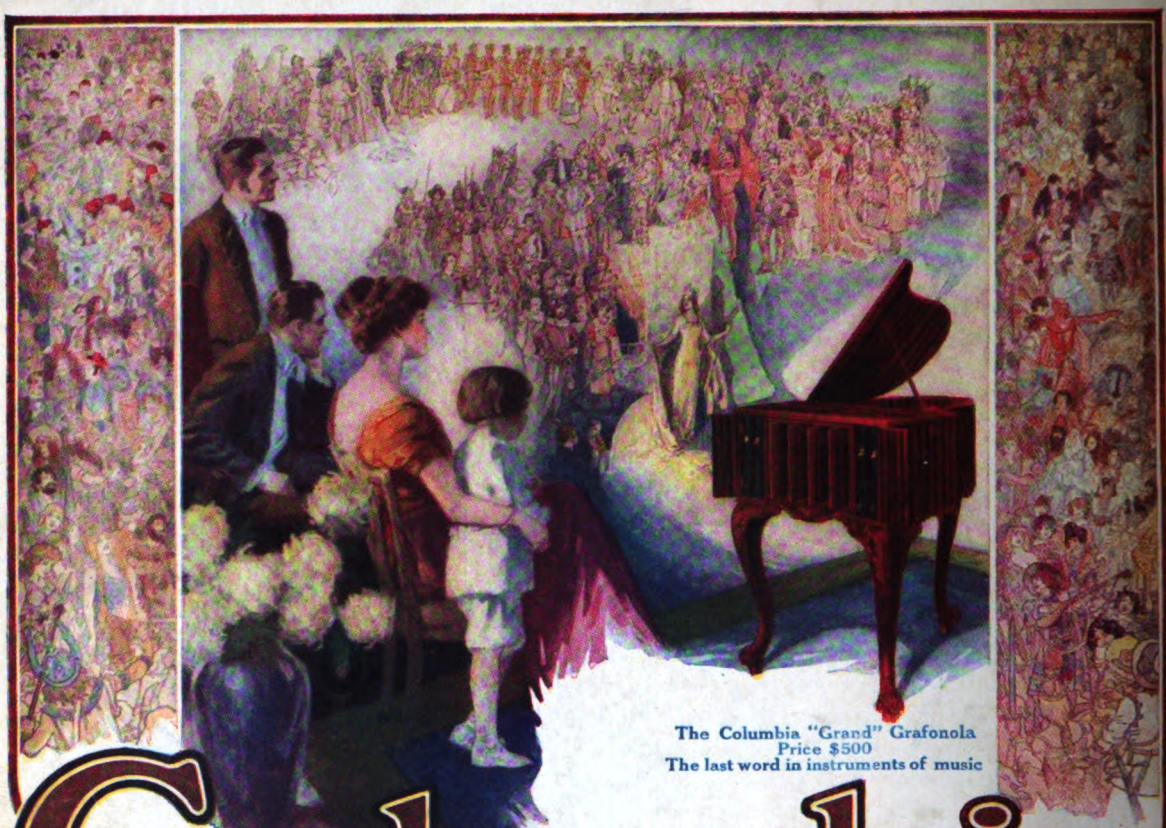

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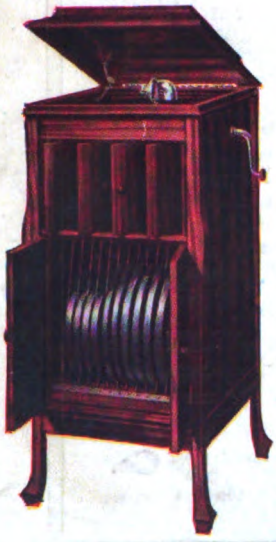

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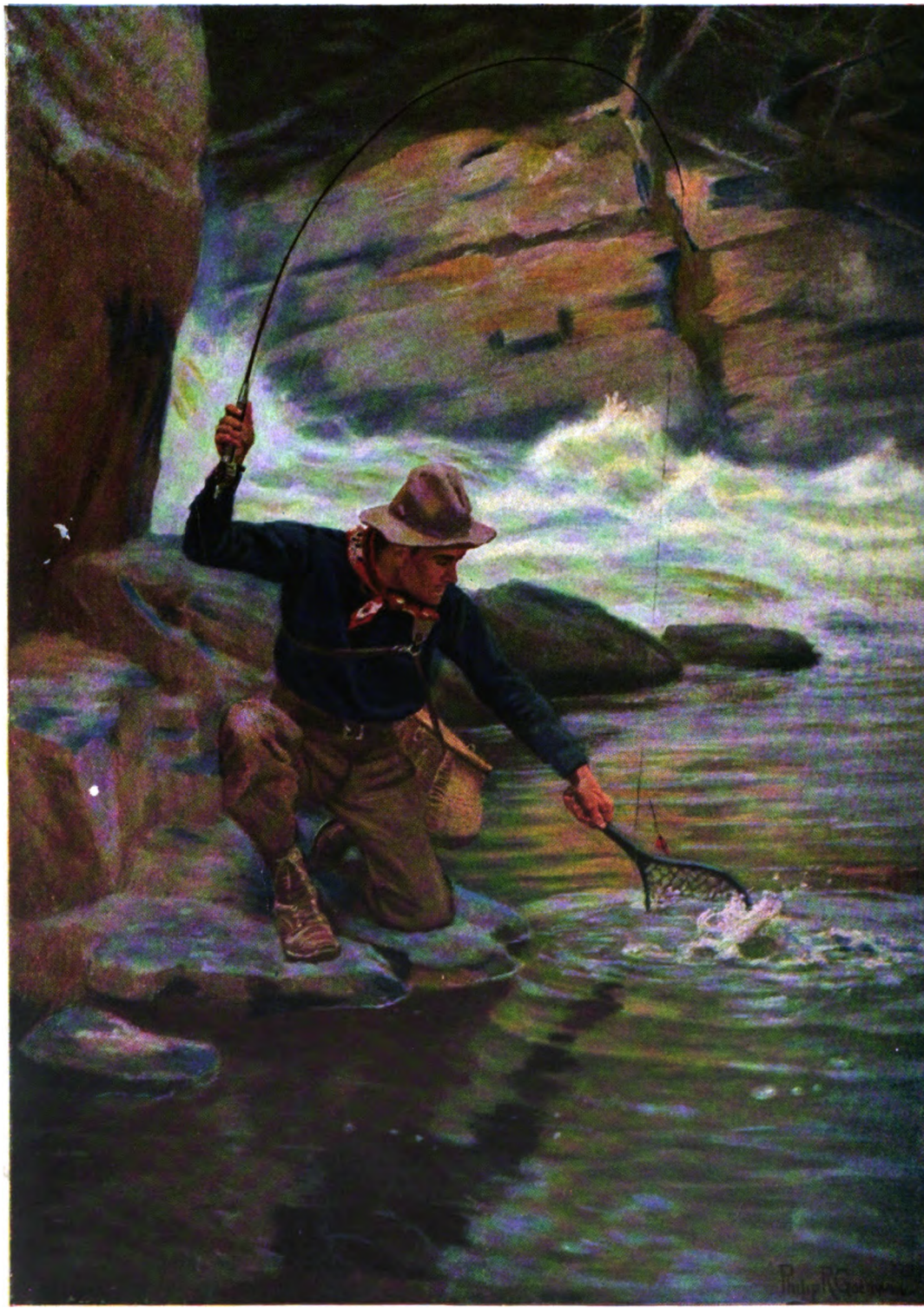

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First down and the enemy had the ball
And the goal three yards away;
But we held them for downs and took the ball
And won the game that day.

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And in some the stakes were tall;
But we held them for downs on the three-yard line,
And that was the best of all.

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WHAT ARE ATHLETICS GOOD FOR?

By WALTER CAMP

Illustrated with Photographs

THIS is a question that demands an answer. The rapid spread of athletic interest and activity in this country in the past decade has no parallel in any other form of human activity. Criticism is becoming less virulent and effective opposition has practically disappeared. There remains the question of the place that sport should reasonably occupy in national life. This question Mr. Camp answers in the article that follows. His long connection with and interest in amateur sport make his opinions conclusive. His field of vision is broad and takes in much more than mere performance on the playing field.

AN Englishman once wrote: "It is a fearful responsibility to be young, and none can bear it like their elders!" The truth is that our athletic point of view is constantly changing with years, and yet so steadily and progressively that few indeed are those who recognize the humor of it all.

"I wouldn't do that if I were you," said the eighteen-year-old sister to the thirteen-year-old young brother who was endeavoring to stand on his head on the lawn. "You couldn't do it if you tried! I'd like to see you!" was the reply. Perhaps five years earlier she might have tried.

I remember having a very earnest conversation at one time with a professor who sincerely believed that it was possible to bring boys up with no games or sports, their sole exercise and recreation being a four-mile walk daily. His convincing argument was, "That's what I've done for twenty years!"

This is almost identical with the so oft-repeated saying, "You'll think differently when you are my age," which the elder man believes is a convincing argument.

It is necessary in taking up the problems of athletics that we realize fully these limitations of understanding and appreciation that nature advances exactly according to the age period of the indi-

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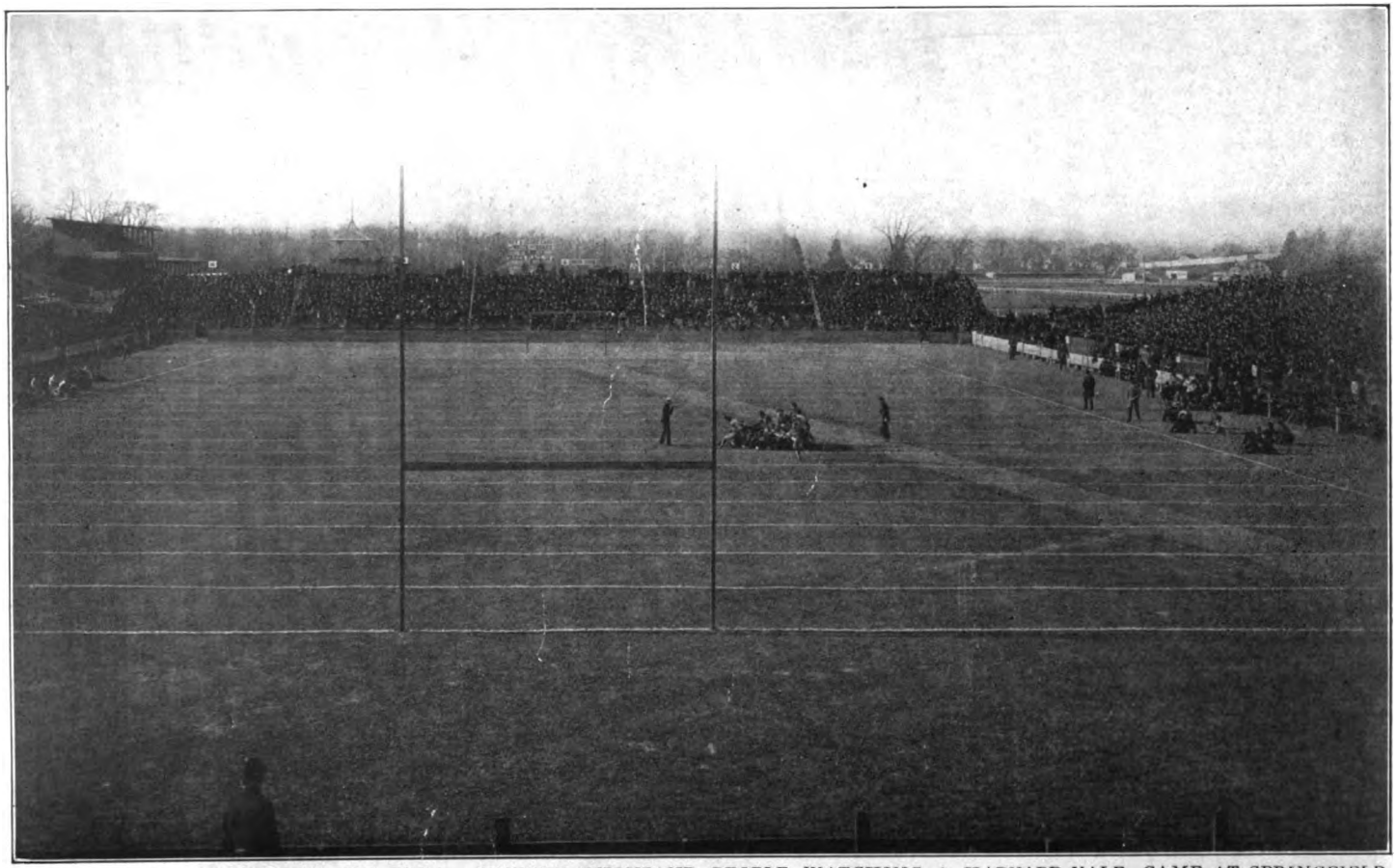

FOOTBALL CROWDS OF THE OLD DAYS. SIXTEEN THOUSAND PEOPLE WATCHING A HARVARD-YALE GAME AT SPRINGFIELD

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OTHER LANDS ARE MOVING IN ATHLETICS. HERE ARE 4,000 PARISIAN CLERKS IN A ROAD RACE

vidual, for unless we allow at the outset for the personal equation we shall always be permitting an error to creep in that may entirely vitiate our conclusions. A man tells you he is riding horseback for his liver. Do you suppose that the boy of sixteen or seventeen desires a pony because the riding will jolt his liver? He doesn't know he has a liver. Is the girl who goes to the promenade at ten and dances every dance and intermission until five and then goes to a dawn tea doing it for exercise? Does her sleepy-eyed chaperon think it's fun or could you convince her that if she were twenty-five years younger she would be doing it, too?

A Princeton writer once described, in a letter written from England, the contrast between "athletics-to-win" and "athletics-for-fun," as follows:

"The difference in the attitude, both of spectators and players, from ours can hardly be more plainly illustrated than by comparing varsity football in the two countries. By a curious coincidence, as a Princeton undergraduate, I saw Yale turn defeat into victory in the second half at New Haven in 1909, and as a Cambridge student I saw Oxford do the same thing in London in 1911.

"Nothing could be more marked than the contrast between these two great games The game at New Haven was a social function, an enormous spectacle, and an organized and fanatical war. The teams had been trained like armies, and fought like enemies. Their supporters roared at each other from opposite sides of the field, and in the Philippines and Alaska and India the alumni of Yale and Princeton were hanging over the wire anxiously waiting to hear the result of that momentous day. And we spectators felt that our unexpected defeat was tragic and terrific. We sat in the bleachers, stunned, and finally when we left New Haven our departure was marked with more desolation than the retreat from Moscow.

"But in London all was different. There Oxford and Cambridge were simply playing a match for fun, and some of their friends and followers stopped in to see them play. Those who were not interested in football, or had something else to do, stayed away. There were about 4,000 people there; they stood in a fringe around the field and clapped a good play, while in a crisis there were scattered shouts of 'Oxford' or 'Cambridge!' "

Now, this observer, who has been

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looking at both sides of the shield, concludes, after making a comparison of the English and Americans at the Olympic Games, that the results were most humiliating in England. This observer does not draw the conclusion that the mere fact that English athletes were defeated carries with it any serious humiliation or concern to the really thinking people, but he does go on and examine into the reasons and finds that the term "sportsmanship" is now being used too often as an excuse for laziness or as a cloak to cover lack of preparation. If this be so, then this marked decay in athletic success may indeed foreshadow, even to the British mind, a real national decline.

In other words, just as we suspect with a nation so we find with the individual boy; it is not necessary to teach him to be grateful for victory, but to show him that the intelligence and earnestness of purpose which made that victory possible are well worth while. Having once implanted that in his mind, there is little question of his going astray by slackness.

When, as in the present controversy regarding a British Olympic fund, we have men like Sir Arthur Conan Doyle and the Duke of Westminster aligned on one side, and Nowell Smith, Headmaster of Sherborn School, and Frederick Harrison on the other, the former urging a $500,000 fund to insure the British athletes being properly selected, trained, and looked after for the next Olympic Games, while the latter are saying that "these modern pseudo Olympic Games are rot and the $500,000 fund positively degrading," then we certainly must confess that there is something more than a trivial misunderstanding of the purpose of sport. Meantime, the opponents of the fund say, "The subscriptions come in slowly and we may hope that nothing like this amount will be thrown away upon so ill-advised a scheme."

Harrison, in his denunciation, says: "A long list of possible candidates is to be tried in order to discover latent talent. Ten per cent will be finally selected. These are to be practically taken out of their usual lives to the loss of their industrial or professional careers and then put into a training stable mill as if they were Derby colts. The average youth

THE SCHOOLBOY IS A NATURAL ATHLETE IF THE PROPER INCENTIVE IS APPLIED

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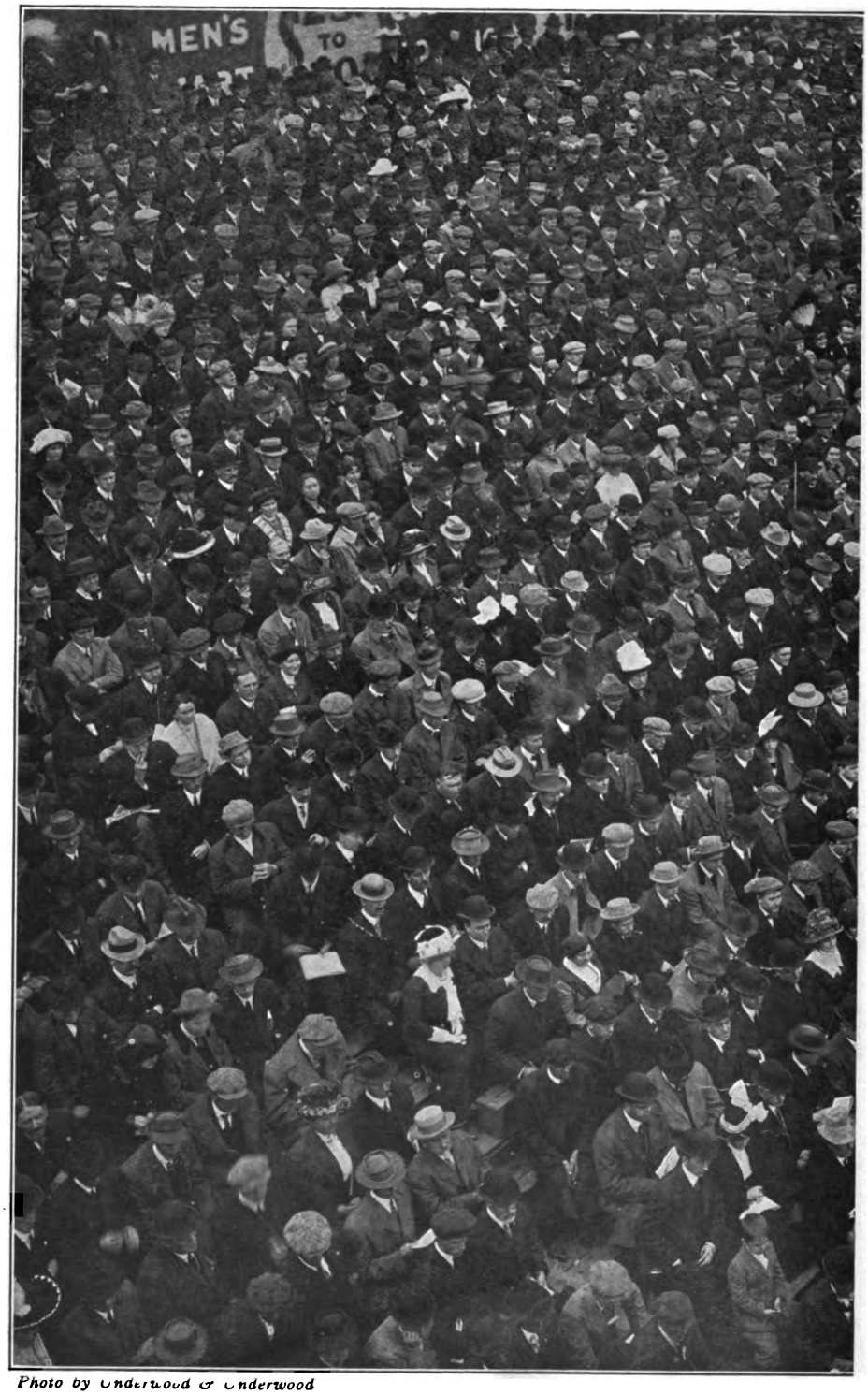

Photo by Underwood & Underwood

MAJOR LEAGUE BASEBALL IS THE GAME THAT FILLS THE POPULAR EYE DURING THAT PACKS THE STANDS TO THE NUMBER OF 40,000 AND PAYS SOME $75,000

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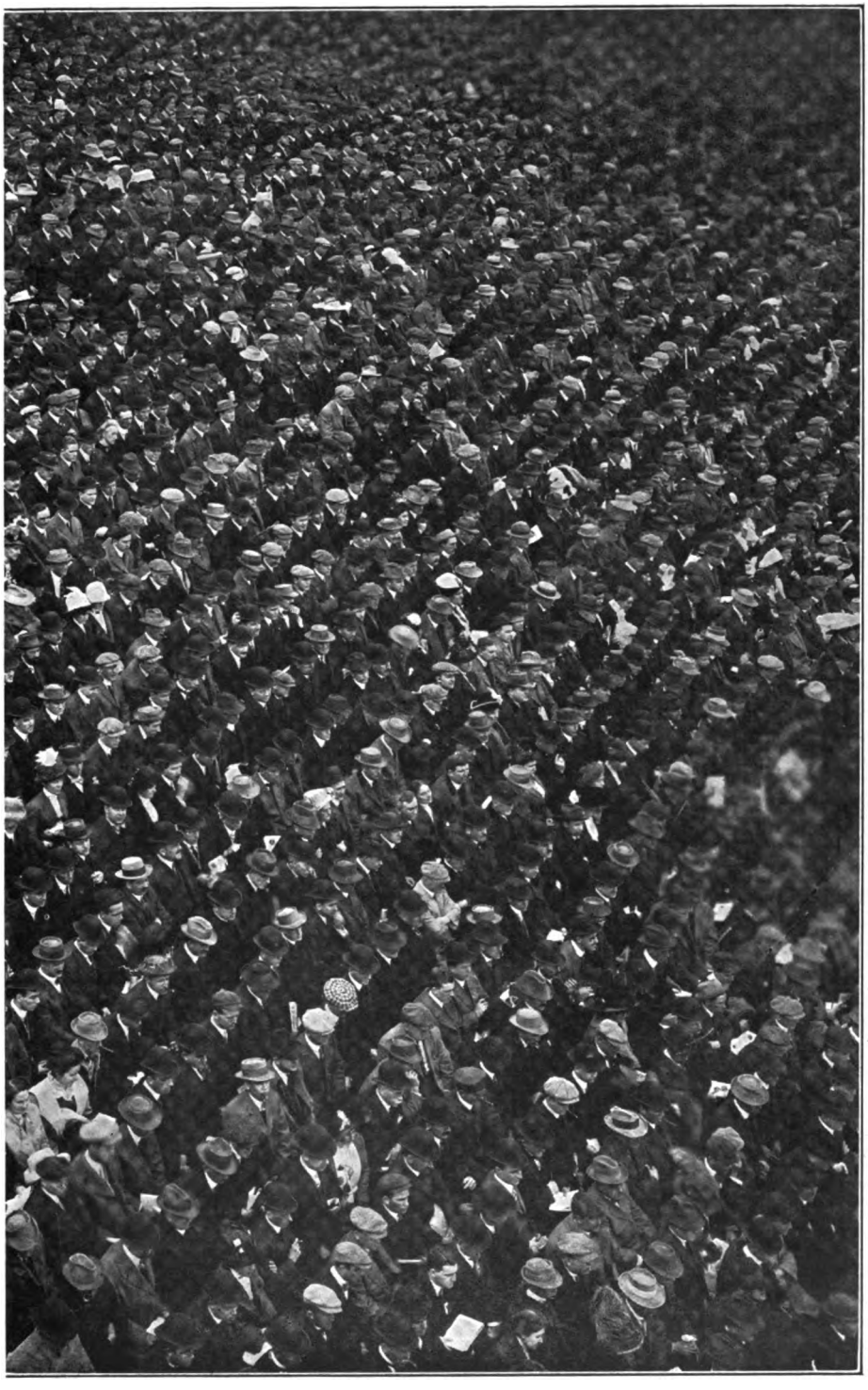

THE SUMMER—THESE TWO PICTURES SHOW ONLY A FRACTION OF THE CROWD FOR THE PRIVILEGE OF SEEING A "WORLD'S SERIES GAME" IN NEW YORK

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A STAR OF YESTERDAY

"Big Bill" Edwards filled the College News when he was a guard at Princeton and is now a highly useful Street Commissioner in New York.

who can run and leap well cannot afford to give up his life for three years to be treated as a race-horse and meet the unavoidable expenses of trainers, practice-grounds, hygienic régime, trials, and all the machinery of a crack racing-stable. Each candidate for the Berlin games is to be nursed, maintained, and kept in condition by public money—in fact, be hired. How does this differ from being a professional performer in a kind of international circus?"

Those who know boys understand full well that the mere thought of good health and sound physique would never tempt the youth to daily systematic exercise. Nature has provided in the boy's love of personal physical combat and competition the real suggestion as to how we shall tempt him. It is by means of our school and college championships. These act as incentives to physical culture, while the game furnishes the pleasurable excitement necessary to the sport. Training means restraint and temperance and ultimate perfect physical condition. Without the game there would be little interest and without the rivalry there would be no training.

Attacks upon these sports always result in some unforeseen way, usually in diminishing physical education and increasing license and dissipation. Athletics are the safety-valve that direct the superabundant vitality of many a man into an honest outlet. Nor are athletics detrimental to studies. On the contrary, statistics show that at one of the large universities, at the time when the baseball and football championships were being won most consistently, the athletes ranked in the first half of the classes, many taking high appointments. As long as boys or college men attend to their studies, it will always pay the generation to encourage them in their sports. Instruction in these should be sought, as in their studies, from the highest sources of experience, but bearing in mind the character of the teacher.

The contact of professionals is a debatable question. As the student would take little note of the baseball ideas of a Greek professor who had never seen a game, so he will take comparatively little note of anything a professional ball player may tell him beyond his province. A player learns little from playing with an inferior but always much from a superior. So games with professionals are excellent from a developing standpoint.

Business principles and self-reliance can be learned in no better way than by actual management of the financial and traveling affairs of these organizations. It is the only way open to the college man for acquiring such experience and avoiding the often-heard criticism of college graduates that they don't know how to take care of themselves. They will not learn it by being kept in leading-strings nor by being continually taken care of. Make them respect the curriculum, but let them learn all they will outside as well. Then a college graduate will be better equipped for any life-work.

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The industrial or business career of a youth referred to by Mr. Harrison should be viewed and treated by him in relation to athletic sports exactly as the curriculum proper by the student. His athletics must not be allowed to interfere with the more serious part of his career, but should rather supplement it. If training for the Olympics means that for three years all serious pursuit in life should be abandoned, then the criticisms would surely be justified. But if, on the other hand, it furnishes a stimulus and a reason for devoting his spare time to a certain definite purpose of perfecting a latent talent by concentrating his exercise upon a special event, the result, provided the plan is sanely followed out, will not only be a development of character in the individual himself, but may also serve to attract others into physical development through the force of example and admiration, for we must remember, as already stated, that emulation is the main force by which sporadic, purposeless, and oftentimes too readily abandoned efforts are made to turn into a continued habit of physical development in the youth.

This, then, in general, is an outline of what these sports are for, and a general cursory review of some of the questions that are raised concerning them. Certain of these questions must be met and a careful and thorough study made of them if we are to progress properly in the next decade in school and college athletics. If we divide the matter into three parts, it will put the subject in the simplest form.

First. We desire to have every boy in school and every man in college acquire the best physical make-up to fit him for a happy after-life.

Second. We wish these sports, which go to furnish this physical make-up, to be turned to advantage in the building of his moral character as well.

Third. We desire, through these same sports and their handling, to teach him respect for the curriculum or his main purpose in life, and, at the same time, give him an education outside that curriculum.

Now, as to the first, anyone who has made a study of the normal, healthy boy from twelve to fifteen knows that to preach to him that going out and taking a walk of four miles and then putting up dumb-bells a certain number of times, and other like physical culture, will mean that he is going to be free from dyspepsia in middle life is absolutely and totally in vain. The boy doesn't know what dyspepsia means and he doesn't understand that he has a stomach and, in fact, he ought not to. On the other hand, tell this same boy if he will do certain things he can make his nine or his football team, he will understand that directly and is at once willing to go through any amount of effort and sacrifice to accomplish it.

Now formerly—before the days of organized athletics—this outlet for the spirit of youth in a physical manner was

FOOTBALL PLAYER AND PUBLIC SERVANT

In college Lee McClung was both gridiron and diamond star, and since graduation has done good service as treasurer of Yale University and later as Treasurer of the United States.

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a much less satisfactory proposition. Skylarking of all kinds, mischief of sometimes serious proportions, and, in general, a reckless disregard for the rights of others was characteristic of the boys in that day. Those who believe that the boys of forty or fifty years ago thought only of study because there were no organized athletics to distract them are quite wrong, as reference to old diaries and annals of colleges will show.

The Heart of the Matter

The question is how to make these incentives to physical culture of the greatest effect and along the lines that will do the most good. The questions here to be considered are whether leagues and associations, with definite championships, based upon percentages, are more effective, or annual contests between school and school or university and university, whose surroundings and conditions are sufficiently similar to make the contest a fair and equal one. Twenty-five years ago, leagues and associations were the fashion. There was an intercollegiate football association and an intercollegiate baseball association, and some years before that there was an intercollegiate rowing association. Now the only general intercollegiate association left is that for track athletics, all the others having disintegrated and for the most part individual championships being played between colleges similarly situated.

It will be rather strange if, with the mania for organization that has of late seized upon the country at large, we shall not see a resurrection of these leagues or associations. One of the strongest reasons given for their abandonment was that they tended very much to the playing of politics and placed a premium upon this. Nowadays the attacks seem to be rather upon individual businesses and business methods and in favor of the politicians. Whether, in that case, it would not be wise to educate our young men by the resurrection of such leagues is a question for the debate of those who are ever ready for change.

Now as to the direct handling of these sports. This brings up one of the most extensive questions of the day, namely, "Shall our schools and colleges have professional coaches?" In the past there have been two schools quite radically differing from each other—one that believes in the professional, pure and simple—that is, a well-paid man who is an expert in his particular branch and who has a record behind him for performance. Some experiences along this line with men who had records for individual performance but who lacked the ability as teachers brought those who had advocated this matter most seriously to consider whether the teaching part was not the more vital after all.

The other side had argued that sport was being debased by professional methods, that the professional taught objectionable ways. Still others contended that even though this might not be true, it was not sport for sport's sake to engage a man who should in the long run direct every move of his men as though they were merely automatons. This school believed in the graduate coach, pure and simple; a man who took a few days off and came back and helped out. With the greater development of organization it became evident that this hit-or-miss kind of coaching was only effective when there were one or two graduates who happened to live near enough to spend a good portion of their time with the teams. Then those teams proved successful, even, it must be confessed, a great many times against the professional coach system, but when it came to a branch where it was impossible to get one of these available graduates for a steady period of time, matters began to take on another aspect.

There has been more or less of a coming together on both sides. There is a distinct demand now for the paid college coach—that is, a man who is an instructor, who has had experience and who is willing to devote all his time to the particular branch, coming back either to his own university or going to another one on a fixed salary. Whether this is the final development or whether there is more to come is still a question. It is very often proposed that all the colleges should get together and agree

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A DIAMOND STAR IN THE MAKING

Everybody knows Ty Cobb, and here he is teaching Ty, Jr., how to shoot it home from center field.

to abandon altogether all professional coaches, meaning all men who are paid to coach. It is possible that the amounts paid to coaches will increase until some solution of the difficulty is rendered necessary, for, of course, the schools, colleges, and universities cannot be driven into the position where the one with the most money can buy the most effective coaching and in this way, by sheer purchase of expertness, win out.

As to the third question, about getting the most out of these athletics in the way of education. So far as possible, the boys should be encouraged to run their own affairs. The cardinal principle should be that these athletic interests must not interfere with the work of the curriculum proper, that outside of that the general management of them should be in the hands of the boys. It is particularly true in the colleges, and it has many advantages, which may not appear at first sight.

One of these is that it has been demonstrated time and again that a changing dynasty in an athletic sport is a good thing. It precludes the likelihood of long, lasting quarrels. Two schools or two colleges disagree. If it is a graduate of some years' standing disagreeing with a graduate of the other university of the same maturity, and these two men represent their universities, the quarrel is likely to be a far more lasting one than if the disagreement lay between two captains representing the universities, because these captains graduate the following year and new men come on, and if no one endeavors to shake up the dry bones of the old quarrel they begin anew with confidence in each other.

As to the finances, here again evidence has shown that undergraduate management furnishes the greatest field for education and a development of the few, at any rate, who act in the capacity of managers. Furthermore, it gives the

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students a distinct feeling of handling their own affairs, which increases the reliability with the responsibility.

It is probably slightly more expensive to handle athletics in this way than to have a paid business head who takes the responsibility off the managers so that they are more or less figureheads who carry out his detailed instructions. But, after all, is not a small amount of increase worth while if by means of this the management is kept in the hands of the undergraduates? We all know that making money is not the object of college athletics. Anything that tends to recklessness or carelessness of management is quite truly bad for these boys, but anything which teaches them the business principles, self-reliance, and ability to tell the value of money is of great advantage to them.

The Problem of Publicity

There is one other issue which perhaps should be taken care of in this connection, and that is the one of publicity. With the wave of popularity that has seized upon all forms of athletic sport, the spectator has become a great problem. In the early days of football, baseball, boating and track athletics, the spectator was in a measure an unconsidered quantity. True, in boating, when the larger colleges began their rowing contests, they were tempted into these races by the railroad companies, who, even then, realized the value to them of an athletic event, but in many of the other field sports the spectators were so few that practically no arrangements were made for their benefit. At the football games the spectators stood around the side lines, restrained only by a rope, and with no accommodations whatsoever. One could easily see that as soon as the number of those desiring to witness the contest became much over one thousand, the question of how to take care of them speedily arose.

In baseball, the first covered stand at the Yale Field seated only about 1,500, and even the big matches at Springfield in football, which were the most popular drawing-card, required stands seating less than 15,000 people. The present football stands at a big university seat nearly 40,000, and the new structure being erected at New Haven is designed to seat over 60,000. It should be remembered that seats to these big football games are only distributed by favor—that is, there is no open public sale of seats. How many seats would be required if the games were open to the public, as are other forms of amusement, no one could tell, but the limit would probably not be reached until the outer fringe of spectators in the seats were so far from the playing surface as to make it difficult to see the sport satisfactorily.

There are those who contend that all this publicity given to college athletics is very bad for the athletes. It does put a certain amount of added pressure on, and yet those who are familiar with boys realize fully that it is the nature of the youth to take things that immediately interest him very seriously anyway, and most people who are closely in touch with college athletics do not think that it makes any particular difference whether the contest is viewed by one or two thousand people or by fifty thousand.

It is sometimes claimed that the boy in college, who is a successful athlete, becomes imbued with an undue sense of his own importance in the scale of life. But when one sees these athletes go out into the world, as the writer has by the hundreds every year, and take up with the work of office-boys, or other positions at the very bottom of the ladder, and do it cheerfully, earnestly, and as a matter of course, he cannot help but be impressed with the fact that this phase of the question is greatly exaggerated. The boy who is a Junior at college watches very closely the career of the man in the class ahead of him. How can anyone suppose that when this same Junior becomes a Senior he never looks out into the world on the career of the last year's Senior, to note the next step that is coming to him in his own life?

It has always been true, and always will be true, that the same general scale of living that prevails in the world-at-large will prevail in the college or school community. But it is pretty generally claimed, and facts seem to bear it out,

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ATHLETICS ARE NOW WORLD-WIDE, AS THIS CROWD IN THE OLYMPIC STADIUM AWAITING THE FINISH OF THE MARATHON SHOWS

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that the school and college communities are far more democratic in their social life than the society outside from which the boys are drawn, and therein lies a protection in itself from the power of wealth, and a period in the life of the young man when his perspective is distinctly improved by the fact that in his school and college community money by itself has not nearly the power that it has outside, and with the development of athletics and an interest in these sports, mere wealth has been forced into a position of disregard.

There is a concern expressed in some quarters that scholarship has also suffered, but here, too, examination does not convince one that this is so. The scholar has a niche of his own just as he has always had, and while popular clamor in the newspapers may follow the athlete, respect and popularity come to the scholar among his fellows and, provided always his aims do not take on the hue of extreme selfishness and lack of interest in his comrades, his standing is even more fully recognized in the college community than that of the more publicly lauded hero of the athletic field.

ONE MAN'S SIZE DAY

By C. L. GILMAN

WHEN you've bent beneath the packsack
And mushed glumly through the mud
With the wet, warped, shrunken leather
Gouging at your heel for blood;
Plodded grimly through the gumbo
Till your feet were balls of clay
While your fifty pounds of duffle
Trebled weight along the way;
Staggered, panting, o'er the portage,
Fell, and cussed the whole air blue;
Reached, at last, the longed-for landing,
Stowed your pack, launched your canoe
Just to have a cold rain catch you;
Paddled hard 'gainst wind and stream
While the pure, cold, sparkling raindrops
Hit your hide and hissed to steam;
Say, there's heaps of satisfaction,
Tea and flapjacks stowed away
And your old pipe filled and fuming,
Checking off One Man's Size Day.

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THE FOUNTAIN OF YOUTH

By CHARLES T. JACKSON

ILLUSTRATED WITH PHOTOGRAPHS

TAKING LONG CHANCES

CHAPTER VI

Through the Deep Swamp

WE paddled on from this bit of Arcady with regret. Alcide, 'Toinnette, and Robert came down from the plantation-house to bid us adieu—and bring us an enormous bullfrog which the boys had captured. We had told them of our desire to eat one of the fried and famous bullfrogs of the bayou region. He was a whopper—big as a chicken, and when we cooked him just as one would a broiler he was great and enough for a family.

I took a farewell sail with the big red lantern which we had brought along with the *Bantayan* and never used, as we dared not risk it with all our fancy camera stuff on board. But this morning I was skimming up Bayou Black while Hen perched on a stump to snapshot the pirogue as she flew by. It was a squally day, and just as I came past the plantation house, leaning the ticklish craft over so that Hen would have a picture with "some action" as he demanded, a puff of wind hit me off the bank. Over we went, green pirogue, red sail—all upside down, amid shrieks of laughter from our delighted Creole friends. As I was traveling with but one pair of trousers, Robert dashed to the house and made me a loan, for the day was cool. I felt it by the time I was fished out.

That day's trip took us quite out of the farm country. The bayou grew more wild and beautiful, the banks lower, and the oaks and pecans gave way to the gray cypress jungle and the latanier palms. We met no one on the last miles except a few negro tie-cutters standing up "row-pushing" their square-end skiffs, chanting lugubriously with the stroke. The men pole the ties out of the deep swamp along narrow water aisles, fifty to a hundred in a string, wet to the skin day-long, hardly seeing the sun until they have towed the ties to the bayou side. There they are loaded on barges and sent on to "Mawgan City."

We pushed on through Bayou Chien with a strong tide bearing us seaward between the semi-tropic banks. The tangle of palmettos, grape-vines, willows, and cypress, together with the masses of wild hyacinths floating along the shores, made a landing difficult anywhere. Then we would come to a bit of upland where the oaks and greensward made the country look like a great park, and then plunge on in the forest. The bayou gradually widened and once again came plantations, the colored hands in the fields and the white quarters showing over the young cane. We reached Morgan City at nightfall and made a pleasant camp under the oaks. Bayou Chien here flowed into the mighty Atchafalaya, which, in turn, thirty miles below, pours into the Gulf of Mexico. We looked out on that swift, yellow flood, bearing the drift and débris of the bankful Mississippi with some doubts — we would have to cross it and go some miles up to reach the Teche country.

My remembrance of Morgan City is that a pest of Argentine ants invaded camp, that we dickered for two chickens for fifteen cents each, and then discovered we had ten cents left with no apparent chance of cashing a check in this town of strangers. Hen's solicitude for

This story began in the October OUTING

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SHRIMPERS PUTTING OUT THEIR SEINE FOR THE HAUL

those chickens was touching. He crawled out of bed all hours of the night to see if they were still roosting on the rail fence by the tent where they had been tied.

He mumbled about colored citizens and predatory 'possums in his sleep, and was out with a "Hooray!" at daybreak when one of the youngsters crowed. Sunday, and wash-day. Sour-dough cakes and coffee for breakfast; but for dinner—oh, you Mawgan City chickens! One apiece. We went without lunch in order to be equal to them.

Pushboats and johnboats went past us all morning, filled with colored folk on the way to church. Some landed near us to make their way through the leafy woods to town. The women had on bright headkerchiefs, and the men were very solemn in black Sunday garb. When I came back from swimming I discovered Hen, as usual, had got into a vast argument with the natives.

One old grizzled-chop darky was asking, "Ain't you-all tellin' fawtchunes like dem old Egypt folkses used to do?"

"Get out!" said Hen. "What makes everybody think that?"

The venerable brother shook his head. "Only one eve' fitten to tell fawtchunes wor Moses, hisself."

Hen was inclined to dispute the Mosaic legend, and at once he was in for it. The old darky laid down his cane and book, wiped his brow, and proceeded to expound. They had it hot and heavy, and our guest wound up:

"Man, you try done tell me Moses got his learnin' f'um dem Egyptologers? Well, wha' dem Egyptologers git it f'um?"

"From the Phœnicians."

"F'm dem Phœnicianers? Well, wha' dem Phœnicianers git it f'um?"

"From tradition."

"Well, wha' dem Traditioners git it f'um?"

Hen paused, stumped at last. And his triumphant interlocutor picked up his cane with a flourish: "Yas-seh! Wha' dem Tradition-ers *git* it f'um?"

And off he went, leaving Hen clear flabbergasted, sure enough.

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HAULING IN THEIR CATCH JUST BEFORE THE ENDS ARE JOINED

After the demise of the chickens we spent a pleasant evening speculating on the sorts of bugs crawling over us now and then. Hen would lay down one of our nickels and I would lay down the other and the pool would go to the man guessing right on the next sort of bug down his neck—redbug, ant, mosquito, or some of the many amateur bugs which we couldn't classify.

We got away a fine sunny morning up the Atchafalaya, much pleased that through the courtesy of the postmaster of Morgan City Hen had his check cashed. We made an extra careful pack of the duffle-bags, cameras, and guns for the venture across the big river. Many were the comments of the idlers along Morgan City's wharves when the *Bantayan* poked her nose cautiously off in the swift flood.

"It's all right to be bold, but not too bold, seh!" one skipper assured us. "Ah'd as soon start up riveh in a pocket-handkerchief as yore boat!"

We had a fight to climb up under the arches of the railroad bridge and then, sitting each a-straddle of a heap of luggage, for the *Bantayan* was so weighted with her pack that the thwarts were invisible and she showed barely two inches' freeboard along her sides as we dug the paddles into the Atchafalaya and passed on. After a mile of hard, slow work, dodging the perils of floating logs and lily masses, we encountered a swell sweeping from a sea-going tug that gave us a bad scare. Hen was steering and he brought the tiny pirogue around in time to meet the rushing wave so that we split it and the succeeding ones fairly and shipped little water. I ceased paddling entirely and balanced my paddle in the air, so ticklishly did the thirteen-footer roll for a minute or two.

"Curtains," murmured Hen, looking at the far shores. But the *Bantayan* stood the seas splendidly. We got out of the mad rush of water past the point and into the easy reaches of Bayou Teche by mid-afternoon, landed, bailed the water out, lunched on a can of beans, and paddled on into this most beautiful country of all Louisiana. But in the

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days following we tired of civilization and wanted to get back to our wilderness. The Teche, the historic home of the early Creole sugar-growing aristocracy, was one succession of great estates, noble-pillared houses, sugar-stacks, and darky gangs afield, with here and there a lumber mill in one of the prosperous little towns we passed.

The bayou became more winding and picturesque above Franklin. There was little navigation, and the stream seemed a show river running through a show-country, parked, scrubbed, ribboned with green, and set with stately oaks and hedges. It narrowed, too, so that one got the most intimate and personal glimpses, sylvan towns, distant spires, and white roadways; while now and then we rounded a clump to find ourselves almost in the tub, as it were, of a group of black, clean-turbaned mammies doing the family wash. On almost every plantation we were stopped by a tiny foot-bridge across the placid bayou, and some ancient of years would hobble down from the "sto'" to open it, collect a nickel, and hobble back to his gallery.

Opposite Charenton we encamped upon the estate of Monsieur Vigoreaux, threw our blankets about the great roots of a fantastic oak jutting over the water, and slept, tired from a fourteen hours' continuous paddling. The next day disclosed the same tranquil beauty of land and bayous, although we did not see so many imposing plantations and stately houses of the old régime as below Charenton and Irish Bend. There were more rice fields than cane and more lumber mills, and the traffic on the stream was much less as it narrowed. New Iberia was a well-kept and pretty spot under its Southern oaks, and now, for the first time in almost two months, we decided to sleep under a roof and stored our camp outfit on the deck of a gasoline boat at the bridge dock. And I cannot quite analyze the intolerable feeling that came over me lying in that stuffy hotel-room.

I was at once unhappy and restless; indeed, beautiful as the Teche trip was, Hen and I were already getting grouched wherever civilization touched us. We wanted our wilderness. The Fountain lay not here nor there among these smiling towns and ordered country-sides. We wandered about New Iberia, the subject of some comment, overhearing one lady in a store remark: "Those two men are sailing around the world in a pirogue!"

And a very earnest small boy came up to me on the street as I sauntered along and asked: "Suh, are you a Cubian?"

THE ONLY KIND OF RAPID TRANSIT IN BARATARIA

I looked the part, perhaps. I hadn't shaved since we dropped into the Barataria woods, and only now had had the beard trimmed into a nifty Van Dyke that made Hen envious. And that with a Mexican hat and the sunburn, made up the part. We were badly off for clothes as soon as we struck a town, for neither had a coat, and the exigencies of pirogue traveling had stripped our wardrobe to the barest essentials. All along we had been solving the question of making that thirteen-foot dugout seaworthy by chucking overboard every last ounce that could be spared. And while we idled and discussed the next move we got some decisive news. Among the letters forwarded was one from the steamship company that had shipped our famous sea-going canoe from New York. It was at the bottom of the Atlantic! The canoe, not the company. It seemed that the carrier-steamer had collided with another somewhere off Hatteras and

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gone to the bottom with its entire cargo. The agent regretted it exceedingly!

"Now, what do you think of that?" yelled Hen. "Florida and the Fountain! Here we are in western Louisiana headed exactly off in the wrong direction, and our canoe at the bottom of the sea!"

We stared at one another. "Florida be hanged!" I said. "This is better forty ways for Sunday. Florida is smeared from St. Augustine to Key West with tourists and hotel grubbers. Down here we don't run into one. Florida is screamed at you from every railroad folder and advertising agency. The Teche country is innocent of either. More beautiful — more romantic — untouched, unspoiled—Arcadian in its——"

A TRAPPER'S HUT THATCHED WITH SWAMP GRASS

"Who's the girl?" said Hen. "That rangy looker in the P. O. window?"

"Go to! There ain't no girl. It's the climate. And the spring. And the two hundred miles' paddling we've done. And the—well, the grub, and the appetite, and chaps like Capau, the dreamy-eyed old swamper, whose stories we've been listening to every night down on the bayou bank. I feel fine and fit. Let's drift off into the Grand Lake country where Capau says the natives are who hunt with blowguns—*actually!* In this twentieth-century America! And see the Evangeline oak——"

But there I rubbed Hen the wrong way. He was touchy about Evangeline. Every town we had struck from Houma to the upper Teche had claimed Evangeline. That maid must have spent months about the Atchafalaya lakes, getting all sorts of trees and dells and bends of the bayou named after her. Not a Cajun but what would grow wide-eyed if you asked of Longfellow's afflicted lady. Once a schoolmaster over at Grand Cane had written a play about Evangeline and her oak, so Capau told us. He saw it with his own eyes, and it had four acts and was as large as your hat. The hotel man also saw it, and the saloon man at the bridge. It was a fine play, but the barkeeper said it wasn't as large a play as Capau insisted. He said there was no more than a good double handful of paper altogether, and he wasn't certain whether that was enough for a good play.

Then there was an argument over the bar in the midst of which a sad-eyed bum who had sidled in to mooch us for a beer suddenly amazed me by taking part and quoting Polonius's speech of admonition to players in general—"Speak the speech, I pray you, etc."

He was a panhandler who had come in over the Espee and admitted he had "done time" in eastern Texas, but he

CLAPBOARDS AND ROSES

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knew more of literature than Hen and I and the barkeeper and Capau, the swamper, rolled in one. But we parted from our courteous friends of the Teche the next morning and started to find a way across to the lake country north of here. We paddled all day and until ten that night, made a shift of a camp in the dark, and started a tiny fire for coffee. And that night, as we prepared for bed, a most startling thing happened. I saw the blaze of a light in the dark, the report of a rifle came, and over our heads in the treetops a bullet sang.

We stared for a moment and then retreated from the circle of the firelight, I seizing my revolver on the way. Then we waited many minutes. Nothing moved in the still country midnight. We went back to our blankets later, cautiously discussing the matter. I awoke the next morning to stare up into the gray-green mist of a moss-hung oak with beyond it a beautiful dawn. I heard a stir in the grass back of my head and turned to discover a tall colored man in a faded striped convict suit looking down interestedly. He carried a hoe and a can of seeds, and when he saw I was awake he removed his old hat and said:

" 'Xcuse me, boss, but I gotter plant dem wattermillion hyah!"

We sat up to look as interestedly at him. Across the bayou we now saw the white sheds and fences of a State convict farm. The same thought shot across our minds.

"Look here," said Hen, "did some of your fellows shoot at us last night?"

Convict Evariste Moore, aged 54, doing twenty years for killing another negro in Point Coupee, couldn't say exactly. But if any fool guard had done so he was ready to apologize on behalf of the State.

Anyhow we were asleep on forbidden ground, the wattermillion patch of the State convict farm of Louisiana. We got out lazily and built our twig fire for coffee and invited Evariste to have some. He glanced cautiously about and took the cup, but respectfully stood at attention, hat off, while he conversed. He told us all about the camp, said he was treated very well, and when Hen took his picture a gush of tears filled the black man's eyes. "If you-all gem'men send that picture back to mah wife in ole Point Coupee, she be the happies' 'oman in dis hull gove'ment!"

We assured him we would. We went over to see the commandant later. He told us undoubtedly one of the guards had fired at our camp, as they were ordered to do at any fire started on the farm grounds. We did not stop to demand justice, but went on down the bayou to camp the next night on Albania plantation, where the young manager, Monsieur Allain, was more hospitable. The old Albania plantation-house was built in 1830 and still stood in its original grove of oaks and pecans.

We discussed with Mr. Allain the best way to get over in the great chain of lakes and little-known bayous stretching northwest to the Mississippi from the Teche. He tried to dissuade us, saying the swamps there were flooded from the overflowed Atchafalaya and Mississippi, but finally loaned us the inevitable nigger and mule-cart to portage our boat across the fields. Out of the beautiful level cane ground, fine and fresh as a new-worked garden, the road grew rougher and wetter, the mule-cart bumped and jogged over logs and into pools where the moccasins crawled from the wheels. Finally, at sunset, the darky declined to go any farther into the big woods. He said it was a bad swamp from now on, and there were no houses and probably no land to be found above water.

Now Hen and I should have camped right then and there rather than go into the Grand Swamp at nightfall. But we felt fit and fine, having slept most of the afternoon, so after buying a live chicken from the last nigger shanty on the road we paddled off into the flooded forest. For a mile or so we found a tolerable straight lane and then the blazed trees marked the trail. But presently, as the sunset and the gloom gathered in the mighty cypress, we had to turn from this blazed trail to paddle around a fallen tree and this involved us in a patch of brush under which we pulled and dragged our pirogue, consuming so much time that when we had got into open water once more we were surprised to

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find how dark it had become and that off to the northwest there were mutters of a coming storm. Then we were unpleasantly surprised to find that the blazed trail we were following was no longer ascertainable.

We paddled on through the gloomy shades looking for a lessening of the trees which would mark the shore of Grand Lake. We had been directed to the camp of a lonely hunter who would receive us on Allain's word. But we had to make another long detour, working about floating logs and under a jungle of creepers and latanier palms. The big lake had overflown its banks and there was land nowhere.

"There's a sizable chance," murmured Hen, "of roosting in a tree to-night."

It looked more like it every yard. And the storm grew rapidly, so rapidly that presently, save for the flashes of lightning and the shimmer of a young moon all but obscured, we saw nothing. And then the great gray trees with their flying moss streamers were not reassuring. As the wind soared stronger we dwelt upon the possibility of a limb plunging down and sinking us all yards deep in the swamp mud. We got under a veritable hornets' nest of thorn-vines where we had to use the axe to free the boat, and by that time the squall hit the big woods with a demoniacal fury. How it did roar and blow!

We brought up under the lee of a fallen log and hung there tightly while the forest heaved and shrieked about us. A spatter of rain came with it, but we faced it head down, resolved not to take chances on trying to find shelter under our rubber cloth in this melee. Fortunately there was little rain. The gale buffeted us for half an hour, with the most terrifying electric display I ever saw, and then as suddenly died down. Only a dying blast came now and then, and behind the flying scud the stars were shining as peacefully as they had an hour ago. Our hair and faces were filled with bits of moss and rotten bark torn from the trees, and when we tried to push out, the broken brush impeded the pirogue. But at last, after a few more hundred yards of work, we saw a thinning in the forest, struggled toward it

DESCENDANTS OF BARATARIA PIRATES OF LAFITTE'S TIME

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and from there caught a glimpse of open water. The shimmer of the waves in the setting moon showed us the way. We paddled into the big lake at last, tired from a four hours' battle with the swamp.

But nowhere had we found an inch of land. The majestic cypress arose sheer from the depths, and their spiked knees caused us to paddle warily away from the points. Luckily the sea was fast running down and when we rounded the first point we were in calm water. But not a house or a habitation, nor even a foothold! As we worked on, skirting the forest shore, I felt a movement at my feet, and the bedrabbled rooster we had purchased uprose and crowed, shaking the water from his tail. He had been tied to the main sheet, the stick and canvas lying furled under me.

"Good old scout!" yelled Hen, "that sounds very cheerful!" Then he pointed: "Brought us luck—there's a light!"

We saw a gleam far to the east. I laid a course for it—and it disappeared. Then I struck a bearing from the far point of land and one dim star ahead and steered on. Twice again we saw the light, and each time it went out or was hidden. We anxiously scanned the dark line of forest. The last bend of shore brought us full in the run of the waves from the lake, and the wind was again rising. The *Bantayan* wallowed down badly with her handicap of rainwater under the pack, and we were unable to bail. Then we ran into a field of our old enemies, the water hyacinths, tossing on the waves, and these sheered us far off our course.

It was an hour before we drew near the point where the light had been. The shore was dark as Erebus. We stopped and began shouting. Then we paddled a mile along the woods, shouting and hallooing. The prospect of encountering another blow on Grand Lake with a shore-line so filled with tossing logs and deadly cypress spurs that one could not approach it was not assuring. On we paddled in the dark, anxiously trying to distinguish the tossing lily masses from the drifting logs. The wreckage was smashing against the bases of the submerged cypress trees, and one stretch of shore consisting of willows gleamed a ghastly white against the forest because of the trees being completely skinned by the bombardment. The whole shore of the lake was filled with this wreckage of the upper rivers poured by the Mississippi into the Atchafalaya. If we had known then as much of what a "flood-crest" meant in the Atchafalaya basin as we did later we never would have tackled it. The entire country north of us, forest, lake, and bayou, was buried under the rushing torrents from the Father of Waters.

But Hen and I went blundering on in that thirteen-foot hollow log looking for land. We whooped again for that mysterious light. It was dirty going, and presently the wash of water inside the pirogue was alarming. She was filling from the smash of the seas, for we had to keep her broadside to them to skirt the shore. To head out was madness and to attempt running in over the flooded shore among the driftage was equally dangerous.

And just when we began to think the voyage of the *Bantayan* had ended right there, and we would weather the night in a tree, a light flashed out startlingly close. Then we made out a high platform camp. A man was peering across the whitecaps at us. And the way we headed the *Bantayan* about and came splashing in under that platform was illuminating. We were scared. The last seas filled and rolled the pirogue like a log broadside on against the pilings, so that we grasped desperately at the foot of the ladder.

The swampers above were yelling down at us in French. Finally, with their help we got the *Bantayan* out of the wash and driftage and on a submerged float behind the camp. Then we crawled up wet and chilled. A gaunt, bearded man was staring at us. Then a younger one addressed us in fair English. We were in a Grand Lake tie-cutters' camp and a dozen Creoles and Spaniards from the deep swamp had taken refuge on M'sieu Landry's platform until the storm was over. When we told them we had made our way in the dark across the swamp from the Teche they were frankly incredulous.

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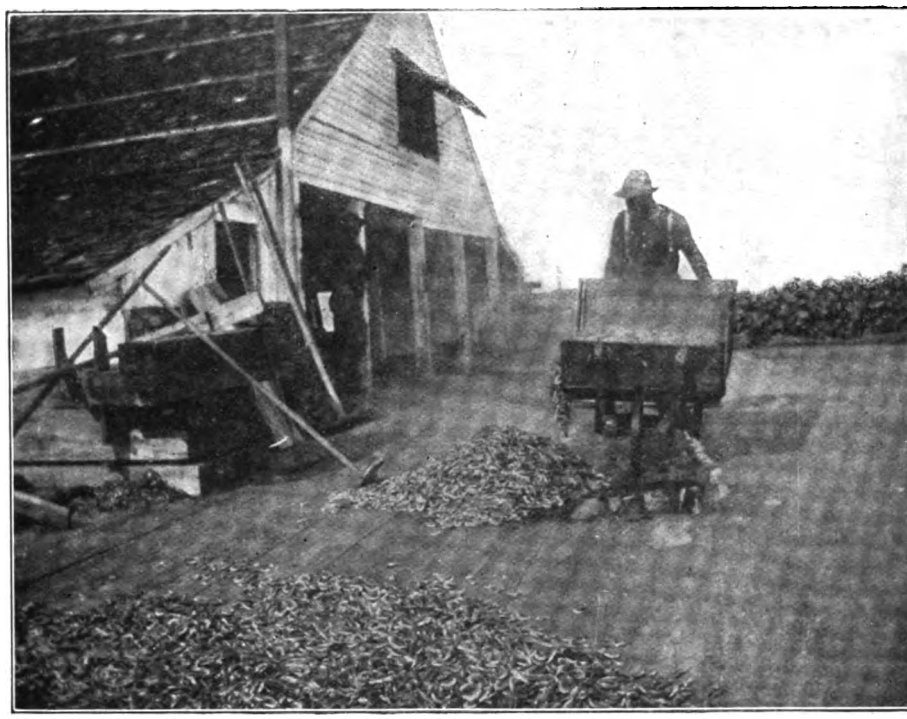

THIS IS THE WAY THE SHRIMPS ARE HANDLED ON THE DOCK

"*Tres bien, M'sieu,* but how yo' know trail?"

"Didn't know any trail! We just bumped her through."

The young man shook his head. "Yo' wan lucky man! By Gar, I couldn't find mah way in dis stawm and de *Crevasse!*"

Hen whispered to me as he wrung the water out of his socks.

"Say, we've made a reputation! Now don't spoil it by any fool exhibitions with your paddle to-morrow! Throw out your chest and tell 'em that this was just a little joy ride!"

"Hi, if only Allesjandro could see us now! If we ever get back to Clark *Cheniere* we'll give a ball in honor of Ponce de Leon and Columbus and Balboa and our other fellow-navigators."

Hen sat down to his coffee and gave a fervent account of our travels and the Cajuns listened respectfully.

The young Felix murmured: "Yo' sho' wan beeg pirogue man! But why yo' travel round with dat chicken tied by hees leg to dat string in dat boat?"

Outside we heard that fool rooster give a cheerful crow, for it was now close to dawn. Clearly we were under suspicion.

CHAPTER VII

Some Rough Lake Paddling

WHEN I awoke under the mosquito bar M'sieu Felix Landry was moving softly about. He greeted us with gentle courtesy, and we discovered that the other half-dozen men had breakfasted and gone quietly away "out front" in their pirogues. They had all talked in undertones so as not to disturb the sleeping guests. Can you imagine half a dozen Irish or American woodsmen tiptoeing about a room out of consideration for two strangers? I can't. That was the Creole of it.

M'sieu Landry was animated enough now. His son, Florion, had caught a fine gaspergou, and we had a famous *cou'bouillion.* Also small, snappy biscuits, the best ever. Felix had been cook on a

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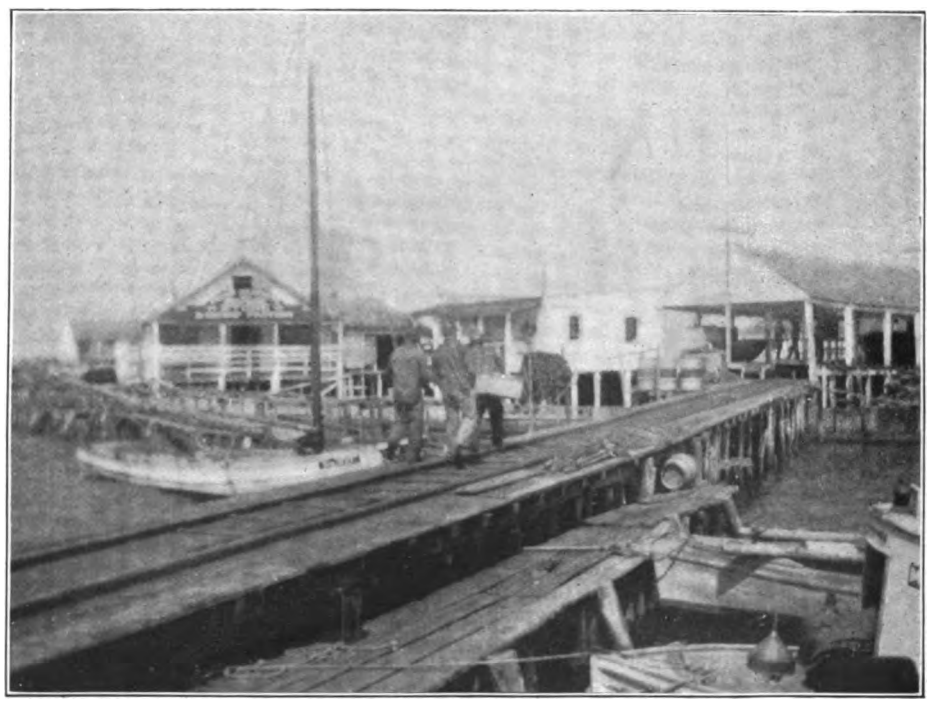
Mississippi packet, but love for the woods drove him back to them. In the four days the Norther kept us penned up on the platform camp he and I fraternized over that most mellowing of outdoor bonds—camp grub. Florion and I shot black squirrels in the swamps, and Hen hooked a big catfish and a 'gou or two, and we had *cou'bouillions, jambelayas, poission piquantes, roux,* all made famously under the hand of M'sieu Felix. Florion caught some crawfish and we had a great *bisque.* M'sieu was delighted to have a pupil in Cajun cookery.

Four days we ate and smoked and argued in the swamp *patois* interlarded with our pidgin-English. Six other men came in, driven from the lakes by the storm. We were on Lake False Point, we found. Grand Lake was just visible through a stormy pass to the east. To the west the whitecaps beat on unbroken forest through which the fierce currents whirled from the flooded Atchafalaya. It was great luck finding Landry's camp —otherwise Hen and I would have been in for it. The Cajuns all declared we could not ascend the chain of lakes in this ridiculous pirogue. There was no land above water, no shores, nor would there be any good weather this month. Everything was drowned by the angry rivers pouring their floods down from the melted snows of all America; it would be one continual torrent through the Atchafalaya lakes until after the May head-rise.

"Well," retorted Hen amicably, "we can't go back, so we've got to go on. I like this blamed country—where there's any of it above water—and I like the grub. Florida is an old ladies' home compared to this shindig."

Our gentle old Creole friend kept his lamp burning in the window all night after our advent, for, as he explained: "Ah, M'sieu! How I not know some odder lost man lak yo' not be out in dat stawm?"

He also asked solicitously if we knew the signals for the lost. Two quick shots and then a single one, repeated? We told him we did, and also the rule of the woods that a needy swamper may break into any untenanted camp he sees and help himself to grub, provided always he



ON THE DOCK AT "MAWGAN CITY"

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does no wanton damage in the camp.

Florion and I had another squirrel hunt with his two "runnin' pirogues." They were twelve-foot craft, hewn to such a thin nicety on the sides that they were hardly more than canvas—low, needle-like canoes in which we skimmed over places where the heavier boats could not run.

I did the rummy trick of shooting over my right gunwale from the pirogue and promptly took a duck. The slender boat shot upside down from the recoil so quickly that I came up gasping, to meet Florion's gentle laughter.

"Only two ways yo' can shoot from dat boat! Wan right ahead and odder way over yo' left—and yo' mus' watch her at that!"

We had some great squirrel hunts. Also took a shot at a great white-headed eagle which I drove from its nest. Then we went back to camp, dried our clothes, and lolled about while Felix got dinner. Always, of course, came the preliminary coffee.

Florion played his mouth-organ and told joyously of his "girl" over in St. Mary's parish. He was a handsome, brown-throated boy, gentle and merry and skilled to the woods and water; with a laughing curiosity as to the great world whence we came. Two more of the swampers returned that afternoon and another feast was on—game and rice and sweet cakes. All this time our hapless chicken, dubbed "Lord Teche," had been roosting out on the platform, tied to a string, fed every day to repletion, but lonesome. We thought of hospitably decapitating him, and then our hearts smote us. He had got to be a friend—and besides there wouldn't be enough of that little chicken for six lusty men!

So Lord Teche crowed valiantly every morning and scratched the door for M'sieu Landry to come fetch his breakfast. The Creoles were too polite to intimate that chicken was good. Anyhow we had game and fish in abundance.

At night the Creoles played *"vingt-un"* and another game which they called —to us—"Beeg dog."

"Ah, dat beeg dog!" said Felix, "I catch dat ole lady ace, but dat beeg dog —heem never I catch wan leetle time."

"Beeg dog" was the jack of spades, we learned.

And now, ye neurasthenics, ye thin o' hair and worn of eye with the tread-mill of the cities, I want to tell you something. A glimpse of the Fountain! At least what our wilderness had brought to Hen and me. We were tired that night, from pulling in the currents on a fishing trip to the big cypress points, so we turned in earlier than our hosts, and I declare to you that, lying in my bunk, my head within two feet of the table where four men were wrangling over the card game, and wrangling with laughter long after midnight, I fell asleep and never woke up till the sun poked his morning face into camp! Can you beat it? No, you can't! You've got to wander over the face of the waters and under the beat of the sun and be swept by the Gulf breezes, and struck by the slant of the rain for three months to be able to drop down in a swamper's shack and know the dreamless slumber of the heart at peace.

They were at their "beeg dog" another night when I was writing up my notebook at the same table. I became aware, my glance bent on the paper, that their languorous murmur had ceased, and looked up to find the eyes of all five men fixed on me intently. A big, lanky swamper had said something to call their attention to me. Old Felix now laughed apologetically.

"My friend he say if he could write so lak dat he sho' neve' would be in dees swamps."

The big swamper laid down his cards and laughed too, wistfully.

"I sho' neve' would. If I had wan education lak dat I sho' go to N'Awlyins and be a clerk in a sto'."

"No, you wouldn't," I answered. "You just think you would. You'd try it and be stiff and cramped and ashamed to be bossed by some shopkeeper, and some day you'd think of the free lake, and the sun, and the wind off the big salt water up from the Gulf, and then you'd throw up your job and come back to the woods."

But he laughed, a sort of pathos in his brown eyes, rubbing his big hands, as he watched my notebook and Hen's camera,

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"Mebbe. But I would lak tryin' to be a clerk in a sto'."

The next day the norther seemed to have blown itself out. We could see the light green of the tupelo gums against the gray of the cypress across Lake False Point at least, even if the yellow tides ran fast and higher day by day. Landry counseled us to wait, but we had been the guests of these gentle folk long enough. So the next morning, wondrously beautiful, clear and calm at dawn, we got away, the *Bantayan* packed tidily, and Lord Teche in his den under the coaming. The woodsmen warned us to stick close to the west shore of the lakes; they were doubtful as to where we would find a stopping-place at night. Certainly no land was above water in seventy miles, and there were few camps along the Atchafalaya lakes now occupied.

We paddled away much lightened by leaving our sail and spar behind; also part of our kitchen irons and some of our grub. But we had a week's provisions, and here, in the fresh lakes, had no need of carrying water, as we did in the Barataria region. The Creoles shouted a cheery farewell as we drove around Point Camille. Never did we meet a better reception, but among a people who met us everywhere with kindness it is hard to choose.

We rounded Point Metier and Point Coquille that morning only to run into a freshing northwester that drove a dirty sea in our faces. But we had to keep on hugging the shore so that if the *Bantayan* filled and plunged to the bottom under her load we could at least swim to the trees—a dismal refuge, however, for miles of flooded swamp would confront a man in any direction. In fact there was hardly a chance of getting out alive, if once shipwrecked.

We had trouble at all the points, for the yellow floods boiled fiercely, and the swells rode so high in among the stumps and trees that we dared not seek refuge there. At noon we cautiously ran the pirogue's nose up to a tossing fragment of a log raft, pulled her up, and ate a hasty lunch. Lord Teche was set out on the logs to stretch his legs. But the wind was getting high and we put in in a few minutes, for it would have been a desperate shore to be weathered on. The trees and saplings in the cove were literally torn to splinters by the pounding they had got from the driftage during the recent gale. So we had to head the tiny *Bantayan* straight out in the whitecaps.

It was bad, but we paddled on, seeing no one nor a boat nor camp all the day—nothing but the stormy lake on one hand and the impenetrable jungle on the other. The lake is well named Fausse (False) Point. Time and again we were encouraged to work for hours to a bold promontory, thinking to find it land above water and offering a haven, to discover nothing but the crash of the drift among the great butts of the cypress—and another great curve of forest beyond.

Grand Pass, fifteen miles to the east, was filled now with lowering scud, and a spatter of rain came at times out of the northwest.

"Bad weather due," growled Hen; "I guess we should have taken Landry's word and stayed off the lakes. Catch those waves a bit deeper and hold her head on. It's mean steering back here."

It was mean forward. The pirogue split the combers, but a lot of them shook themselves over me, and only her tight little decked space, not so much bigger than a bushel-basket, kept her from filling. As it was Lord Teche, between my knees, was soused now and then, and I began to estimate the amount of water down under the luggage. We could not rest a moment to bail it. We began to scan the long, wave-beaten line of forest more anxiously as the sky dulled. The gale blew steadier and harder every hour.

I glanced back once to see Hen spitting the top of a whitecap from his teeth—it had curled us neatly on the starboard and only the rubber cloth saved us from swamping. As it was, it took lively work to bring the dugout around before the next wave caught us. We held off the shore until dusk. Now and then we heard the crash of a falling limb in the flooded woods. The vast masses of Spanish moss waving from the cypress were indescribably gloomy and depressing, and the thought of seeking shelter in that fearsome wood was more so. We

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had not seen an inch of land above water all day.

The last round of a point laid our course so that the swells had us full broadside and we stopped to scan seriously the line of dirty sea.

"As sure as shooting fish in a bucket, we'll be slammed into the cypress spikes, if we try to keep close in," said Hen. Let's make a tree roost of it for the night."

"And lose our canoe and outfit?" I retorted. "No, we'll have to beat it on and look for a chance to run in some cove or bayou."

Darkness was lowering when we were crawling slowly, with minute inspection of the mass of drift grinding among the trees, along a mile-wide cove. It offered no harbor—was, in fact, worse than the sheer lake. But at the far side the grim wall of forest was a bit broken and we saw the shine of the latanier palms in a sort of glade. When we reached it all we saw was water stretching in, and between us and its comparative calm a hundred yards of solid wreckage with the yellow waves leaping all along its outer edge. It was hopeless.

We had worked on past this mass and I was digging off on the weather side to draw the dugout's nose up into the waves, when I heard Hen shout.

"I saw a camp!"

I shot a hasty glance at the wood shore. A great eddy had hurled us on and I could see nothing. But Hen kept yelling that he saw a camp behind the fringe of storm-torn maples.

"If you think so let's head her in," I yelled. "But God help us if there ain't! All that stuff above is working down on us, and the spikes are thicker in there than hair on a dog."

THE LIGHTER SERVICE ON THE COAST OF BARATARIA

We watched our chance to bring the pirogue about and run with the seas before one slapped us broadside. Hen yelled again. The first comber on the turn had gone all over him—rolled clear forward, in fact, and struck my back.

"Dig!" he cried and we shot in. "Dig!" and we swept past a mass of battering logs. Then a swift draw of the paddles and the canoe lifted past a serried row of cypress spikes half buried in the foam. And then another and another. We hurried the *Bantayan* this way and that like a scared cat, as the seas chased into the woods after us. And then we saw a mass of our old friends, the water hyacinths, and shot her behind them, where only the heave of the swells

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stirred us, and dropped our paddles, sweating and soaked.

Sure enough, right ahead of us was a log hut perched on its platform. We could get no nearer, so we slid overboard in water above our waists and dragged the pirogue on a few yards into the floating tangle—logs, vines, lilies, grass, and dirty foam. But we could not work her within a hundred feet of the shack. I left Hen anchored to a tree and struggled to the place, swimming, wading, climbing. The door was padlocked, but I could see in the chinks. It was occupied, or had been of late. I went back and we brought our duffle sacks to the platform, along with Lord Teche on his hobble. The canoe we dragged up on a fallen but solid tree and left it tied.

We rattled the padlock chain and called. But it was plain no one was about. Where the mud had fallen from the chinks we saw moss-filled bunks, a clay furnace, open fireplace, and a table.

"I reckon, as we're castaways, we might as well invoke the law of the woods and make ourselves comfortable," I said. "Hand up that old axe!"

We chopped the staple out of the door and threw it open.

It was a darkies' swamp camp, the crudest imaginable, but it offered a roof. And we needed one. In fifteen minutes a fury of rain and wind broke over us that set the woods to howling. Crash after crash told of where the trees were falling in the soaked under-soil. But we had a fire going in no time and the blaze made even the clay and log camp seem homelike after that lake. There was no chimney. The smoke made its way out through a raised slab of the roof. We were too weary to look about or speculate as to the owners. We cooked a hasty supper, hung out soaked clothes about the fire, and tumbled on our blankets spread on the moss bunks, fervently hoping there were no other occupants. We had barred the door so that, if the niggers came back in the night—which was hardly possible, as it did not seem a human being could live in the swamp in that hurricane—they would have to awaken us and give time for explanations. At that I slept with my revolver within pulling reach. The swamp blacks are given a bad name by some. But we dropped into a slumber that all Africa could not have broken with any depredations whatever.

(*To be continued*)

PUSH, DON'T TOW, THE SPARE CANOE

TOWING an extra canoe at the end of a rope is disheartening work. At the beginning of the stroke the "lead canoe" has some slack, which it will take up with a jerk just in time to kill the glide which should follow the withdrawal of your paddle from the water. It is far better and easier to push the spare canoe than it is to pull it.

Taking advantage of the seats and thwarts, lash the extra canoe at one side and partly ahead of your canoe with the stern of the empty boat at the bulge of yours and the bow of your craft at the bulge of the extra. A pole or paddle lashed across both canoes should steady the whole. All lashings should be drawn so tight and so well secured that there is not the least play between the boats. The more nearly parallel the keels of the two canoes the better the whole "raft" will handle.

It is advisable to attach the extra canoe at the side on which you most generally paddle where its drag in the water will nearly if not quite counteract the tendency of your canoe to turn and thus relieve your wrist of much labor when holding a straight course. A little experimenting to secure a firm and correct adjustment will result in two canoes paddling and steering almost as easily as one.

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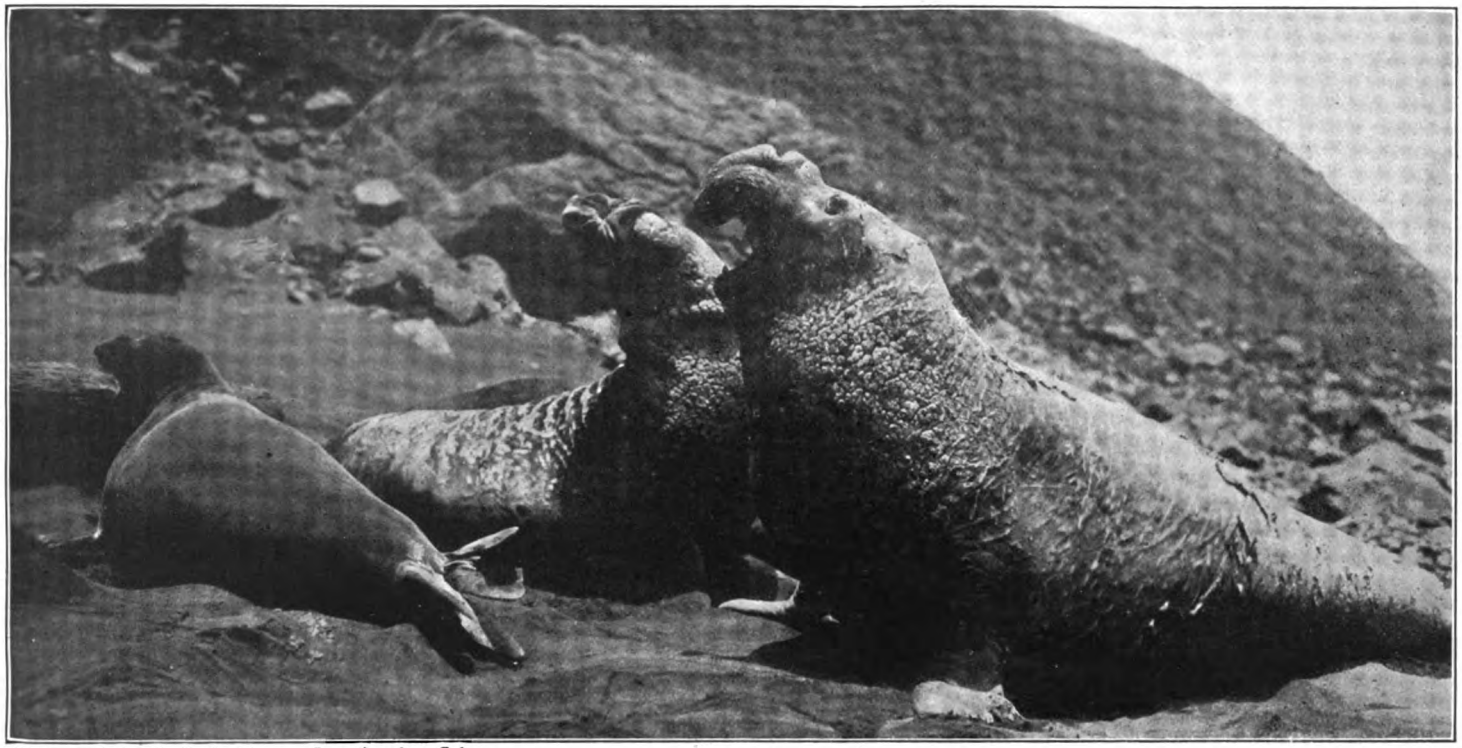

Photograph by E. P. Jochimsen, Los Angeles, Cal.

VETERANS OF A VANISHING RACE

The sea elephant is a nearly extinct species. The island of Guadelupe, off the coast of Lower California, is the only place where they have been found in any considerable numbers in late years. A recent visitor to the island declares that they have been reduced from about two hundred to sixteen within six weeks as the result of a raid by some unknown persons. It is alleged that the hides have been smuggled into the United States for sale. The sea elephant is a curiously docile creature and this fact, together with his great bulk—often running as high as 4,500 pounds—makes him easy to capture. The photograph published herewith was taken at Guadelupe.

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WE KNEW NOTHING OF THE SCIENCE OF PASSING IN THOSE DAYS. IT WAS EACH MAN FOR HIMSELF

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SHINNY

By WALTER PRICHARD EATON

DRAWING BY WALTER KING STONE AND PHILLIPPS WARD

HOCKEY is fast becoming a major sport in American colleges, but it was always a major sport of boyhood. It was called shinny then, and the rules were not complicated, nor was team play always conspicuous. Rather was it a game in which the individual shone. But the same qualities of speed, control, and accuracy were required of the successful player, and the same reverberant roar of the ice under a rush of runners sang like a battle hymn in the ears!

In those shinny days some of us boasted "store sticks," but more of us didn't. Even the store sticks lacked the high, flat blade of the effete modern hockey club. The sticks we made ourselves were cut in the woods, preferably of oak or ash, and it required long search to find a young sapling which had made a freak growth from the ground so that a bit of the root or the first six inches of the tree was at a sufficient angle to the stem. A good, natural stick was a treasured possession, and one never went skating without it. You hung your skates from it on your way to the pond. You used it to hammer over the lever when you put your skates on. It was a club to test the strength of new ice with, or to make a hole over the brook when you were thirsty. If you condescended to "skate double" with a girl, you alternated your hands with hers upon it. And finally, of course, you must needs have it by you when the cry arose, "Shinny! come on an' choose up sides!"

Shinny was not played with a puck, but a ball, usually of hard rubber, though sometimes an old tennis ball was used. The goals were made by placing two stones four or five feet apart. The two captains, elected by the rough democracy of boyhood, chose up sides, and everybody skated to the bank to deposit his overcoat or muffler. Usually the smallest boy on each side was put in goal, not because that was the wisest proceeding, but because he was least able to object, it being considered far more desirable to be out in the rush line. Sometimes there were twenty boys on a side, big fellers and little fellers, and when the ball was put in play you heard the rush and roar of all their runners and the clashing of their sticks as each individual player tried to get the ball into his possession and nurse it, dodging and doubling, toward the enemy's goal. We knew nothing of the science of passing in those days. It was each man for himself, and great was the honor to him who could get the ball away from Frank Wight in open field, as that hero of the ice ducked and dodged and evaded pursuit, keeping the ball against his stick with uncanny skill or shooting it past you only to pick it up again while you breathlessly stopped up and turned in vain pursuit.

There were no periods. We played till we were exhausted, or early December twilight overtook us. Breathing spaces were afforded when a missed shot for goal sped past the mark and rolled a quarter of a mile up the pond. Or else it rolled in shore, on the thin ice amid the weeds, and one or two boys crept warily after it while the rest panted not far off, ready to pounce again as soon as it was recovered.

Those were thrilling matches, in which victory counted for little, since the score was forgotten the next day and the teams chosen anew, but in which no boy was too small to participate, and the best skater kept the ball. I can hear the roar of the runners yet, and see the white powder fly as the leader doubled and the whole pack ground their skate blades to the ice and reversed in pursuit! I can still feel the sting of the cold December evening on my hot cheeks as I went for my coat when the game was over, and see the solemn green sunset up the pond to the west. The boys are at it yet, though they all have "store sticks" now, and call the game hockey. But I am not at it! I tried it last winter—and after the first few rushes, I shivered in goal. Alas, I had left my wind twenty years behind me!

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CAMP PERRY'S LESSONS FOR THE SPORTSMAN

By LIEUT. TOWNSEND WHELEN, U.S.A.

What the Military Rifleman Can Teach the Game Hunter in Method, Equipment, and Possibilities

CAMP PERRY, the largest military rifle range in the world, located in Ohio, on the southern shore of Lake Erie, was the scene last summer of the greatest rifle matches ever held. At these competitions were not only teams from every State in the Union, the Army, Navy, and Marine Corps, but also from Canada, France, Switzerland, Sweden, Argentine Republic, and Peru. All the best individual shots in the world also congregated there, and the arms and ammunition companies did their best to provide everyone with the very best of their products.

To give an idea of the shooting done, the historic Wimbledon Cup match, the conditions of which call for 20 shots at 1,000 yards, was participated in by 532 riflemen and won with a score of 99, while 129 of the competitors made scores of 91 or better out of the possible 100 at this difficult range. The Adjutant-General's Match, under similar conditions and with 438 entries, was won with a score of 24 consecutive bull's-eyes and 109 competitors got scores of 93 or better. The Leech Cup Match, with 517 entries, called for 7 shots each at 800, 900, and 1,000 yards, and the winner put up a possible score at each range and finished with 13 additional bull's-eyes at 1,000 yards.

Then there was the Hale Match, which was as pretty an exhibition of close shooting as was ever seen on any range. Its conditions called for 10 shots at 600 yards on a 16-inch bull's-eye instead of the regulation one of 20 inches in diameter. The winner made the fine score of 20 consecutive bull's-eyes and the first five men all made the possible. When a man makes a possible in any match he always continues shooting until he gets out of the bull's-eye, this being the easiest way of deciding ties and also offering a chance at world's records in every match.

Such scores are made possible by the great improvement in ammunition in this country during the past six years. I lay this to ammunition exclusively because that now manufactured will show practically as good accuracy in rifle barrels made ten years ago as it does in modern barrels. Seven or eight years ago the ammunition was much inferior. Scores running around 45 at 600 yards and 40 at 1,000 yards were considered very good then, and only a selected few who were supplied with hand-loaded ammunition ever averaged much better than this. The excellence in modern ammunition is due to improved methods in the making of the bullets, which assures much greater uniformity and better performance than formerly, and also to the improvement in our smokeless military powder. A slight gain was also attained in the change from the old blunt-nose bullet to the modern sharp-pointed projectile, which, while it does not necessarily make a smaller group, is much less affected by the wind.

The point I wish to emphasize in connection with the improvement in ammunition is that our sporting ammunition, that suitable for hunting purposes, has not kept pace with the improvement in military ammunition. Such scores as were put up at Camp Perry would have been impossible, even with our excellent

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Springfield rifle, had the contestants been using the present output of ammunition loaded with soft-point bullets suitable for large game. Our best sporting ammunition is hardly good for closer shooting than a 4-inch group at 100 yards and about 10 inches at 200 yards. If a sportsman desires to obtain better accuracy than this from his hunting arm he is obliged to add more accurate sights to his rifle and hand-load his ammunition. A significant fact is that a firm has just been organized to furnish sportsmen with modern accurate soft-point bullets with the new sharp point as used in the army rifle.

We often hear it stated that our sporting arms and ammunition are as accurate as the average man can hold. If we construe the word "man" to mean the whole adult population of the United States, this statement is doubtless true. But if we change the word to "rifleman" then it is far from the truth. Every one of the eight hundred-odd riflemen at Camp Perry, as well as thousands of others throughout the country at large, were capable of holding so well that to them ammunition of the class of our sporting ammunition would be distinctly unsatisfactory.

The sportsman may gain some valuable hints from the methods of firing and habits of the nation's best marksmen at this great meet. The modern marksman invariably uses the sling-strap on the rifle as an aid to steady aiming. So important and so much of a help is this that one shooting without its aid would be hopelessly handicapped. Its use is universal. Starting from its swivel near the middle of the barrel, the sling passes to the left of the left wrist and then in a tight loop high up around the left upper arm. This loop is so tight that about one hundred pounds' pressure is exerted by the left arm on the sling swivel. That part of the sling leading to the butt swivel is left absolutely loose. Used in this way it makes the left arm practically a dead rest with a universal joint, the wrist, at its upper extremity. Many sportsmen are adapting this military sling-strap to their sporting rifles. While it is no advantage for a snap-shot, yet if five or six seconds are available in which to fire it will certainly pay for itself in steadiness of aim.

All the scores at 600 yards and longer distances were made in the prone position, not, however, as the novice assumes it with head toward the target, but lying with the body pointed at least 60 degrees to the right of the target. This position allows the left arm to grasp well out on the barrel and of itself greatly increases the steadiness. It was very interesting to see how uniformly every marksman assumed this position and used the sling; so much so that it is safe to say that there is but one standard position for shooting prone, and that if one deviates from it in one iota he is handicapping himself.

The rifle is never loaded until one is ready to shoot, for to let a cartridge lie in a hot barrel would heat it and develop more energy in the powder, causing the bullet to strike higher on the target. For the same reason cartridges are never allowed to lie in the sun, but are kept in a box or shaded by a shooting-bag.

Greasing the Bullet

The bullet of every cartridge, before being inserted in the rifle, is given a thin coating with an automobile grease. This is a thick grease of about the color and consistency of butter. In practice the end of the cartridge is stuck in the grease and revolved until all that part of the bullet projecting from the shell is covered with a very thin but uniform coating. Care must be taken not to get any grease on the shell. The advantages of using this grease are three-fold—it prevents metallic fouling in the bore; it increases the accuracy; and it greatly lengthens the life of the rifle.

Tests were made with this grease to determine its effect. The shooting was at 600 yards from machine rest. Four rifles were used, two being shot dry and perfectly cleaned at the end of each day's firing, and two were shot with the bullets coated as described above and at the end of the day's firing simply wiped out with a rag greased with the same substance. Both the dry and greased rifles shot practically as well for about 2,500 rounds, the mean absolute deviation at 600 yards being about six inches. After

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2,500 rounds the groups of the dry rifles began to enlarge until after 3,000 rounds the shooting with these two arms was discontinued.

The firing with the two greased rifles was continued up to about 7,000 rounds, the accuracy even then not having deteriorated to any appreciable extent, notwithstanding the lack of cleaning. It is interesting to note that with the powders used about seven years ago, even in the Krag rifle, an arm much less powerful than our present rifle, accuracy would begin to deteriorate rapidly after about 1,500 rounds. The present "1909 Military" powder has a much cooler gas and does not erode or burn the bore so quickly.

No More Wind Flags

The rifle range of to-day would present a strange appearance to the military rifleman of a few years ago, for none of the many big red wind flags formerly seen are now allowed, and the wind clocks also have been banished. The rifleman now judges the wind by looking at the drift or travel of mirage or heat waves across the face of the target. These can be easily seen through a high-power telescope traveling very like a stream of water, and the speed and volume give an excellent guide to the deviating effect of the wind. Each rifleman is now equipped with a telescope of about thirty power, which he places on a small portable stand about a foot high by his right side when he assumes his position for firing prone. The stand holds the telescope focused and trained on the target.

The abolition of the wind flags was done in an effort to get the shooting down to a closer approximation of actual field conditions. In practice, however, it has made the telescope, an adjunct hardly in keeping with actual combat, absolutely necessary. Field glasses, however, such as the sportsman carries, will show all but the very scant mirage, and on a long shot at mountain game one trained to judge mirage would have no trouble in estimating the wind deviation with such glasses.

Targets are no longer marked with the big circular disks. Such methods are entirely too inaccurate for the modern marksman, who is trained not only to hit the bull's-eye but the very center of it. Instead a spotting disk is used. This is a cardboard disk several inches in diameter with a pin on its back side. It is stuck in the hole in the target made by the bullet, and can be seen by the marksman through his telescope, giving him the exact location of his last shot. Black spotting disks are used for the white part of the target and red ones for the bull's-eye. Even the scorers behind the line have to have field glasses to see the spotting disks.

The modern rifleman does not trust his hand and eye to make the delicate adjustments in elevation on his sights. Such methods would be entirely too inaccurate for the present high standard of shooting, for the eye cannot see an adjustment finer than about .01 of an inch, and the hand bungles this rough adjustment into a still greater error. Instead a little instrument called a micrometer sight adjuster is used. This instrument adjusts and records movements of 1-150th of an inch which are called *minutes*. The changing of the elevation one minute causes the shot to strike higher or lower on the target 1 inch for every 100 yards of range; that is, 2 inches at 200 yards, 6 inches at 600 yards, and so on. Thus the rifleman is able to adjust his rifle to inches on the target, and if he is shooting, say, 12 inches low at 600 yards he merely raises his elevation 2 minutes and he will then shoot into the center of the bull. So convenient is this, and so much more accurate than the hand and eye method, that it is practically universally used at all ranges of 500 yards and over, and riflemen no longer speak of so many yards elevation, but of so many minutes.

A new sight for the service rifle is about to be adopted which will have this micrometer adjusting feature incorporated in it, thus removing the objection of having to carry around a small instrument, easily lost and seldom at hand in action. The micrometer sight-adjuster has been in use for some years and has already been copied, with considerable improvement and ingenuity, in a Lyman peep-sight for sporting rifles. I have used

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one of these sights for several years with perfect success. It is by all odds the best and strongest metallic sight on the market.

A score at the longer ranges is invariably preceded by two sighting shots; that is, the marksman is allowed to fire two shots before the scoring starts. He sets his sights and makes his calculations merely close enough to hit the target on the first shot, notices where this shot strikes, and makes a carefully measured change in elevation or windage on his sight so as to cause the other shots to strike in the center of the bull's-eye. The belief is growing among riflemen that this is not as it should be. It is the first shot which usually counts when the target is game or man, and the rifleman, both military and sporting, should be trained to make the first shot a bull's-eye. Sighting shots should be abolished and the first shot of a series should be a scoring shot.

Fine military shooting has proved one important thing—namely, that a rifle scarcely ever shoots twice alike. The very best rifles with the very best ammunition will differ from day to day as much as 30 inches at 1,000 yards in where their shots strike with constant aim and sight adjustment. Thirty inches at 1,000 yards means 3 inches at 100 yards or 6 inches at 600 yards, and this may be still greatly increased by a wild shot in the grouping of the rifle. The rifleman who knows can afford to smile when he reads of sportsmen advocating fixed, non-adjustable sights on rifles. The sights on every rifle should have fine, easily read adjustments for both elevation and windage. Otherwise the science of rifle shooting is reduced to mere guesswork and luck.

Some of this daily, in fact often hourly, variation in rifles' shooting is due to changes in temperature, barometric pressure, humidity, and light, but there is another factor as great as any of these at present unknown, and therefore incapable of having an allowance made for it. By some this variation is thought to be due to differences in the rate of burning of the powder charge. Experiments are now under way by the powder companies in an effort to perfect an instrument which will record the velocity of pressure of the powder charge.

A manner of firing tried this year for the first time at Camp Perry was "Surprise Fire." The target, a silhouette of a man in the prone position in the middle of a 6x6 foot target, appears in view for the short time of three seconds. During this time the marksman, who has been awaiting the appearance of the target standing with his rifle locked and held at his side, may assume any position and fire one shot. Most of the contestants threw themselves prone and fired from that position. The quick fall necessitated a ridiculous amount of padding of knees and elbows, so that the men resembled football players more than soldiers. It is believed by many that in this form of firing the marksmen should be restricted to the standing position. Modified in this manner, this class of firing would be excellent training for the sportsman, teaching the quick, accurate placing of the first shot, as when the buck jumps in thick cover.

Offhand shooting at 200 yards has disappeared almost entirely from military competitions. This is regretted by a great many who believe there is no school like offhand shooting to teach the niceties of holding and trigger pull. Certainly such practice is most essential to the sportsman who will be obliged to fire most of his shots from a standing position.

Arms and Ammunition

A perusal of the arms, ammunition, and methods used by the foreign teams at Camp Perry is exceedingly interesting and has its lessons to teach. The Argentine and Peruvian teams used a Mauser rifle of 7.65 mm. caliber. This is practically the same size as our .30 caliber rifle. The ammunition for it used by both teams was made by our own ammunition companies, the shell and bullet being very similar to that for our own Springfield except that the shell holds slightly less powder, and therefore the velocity is several hundred feet per second less. The cartridge as developed by our ammunition companies is very accurate, but these teams were handicapped by

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the crude sights on their rifles, they having no windage adjustment, no peep-sight, and very crude adjustment for elevation.

The desire for a better sight was shown by the fact that many of the members of these teams had equipped their rifles with Lyman receiver peep-sights, placed back on the bridge of the receiver and having fine adjustments for both elevation and windage. However, the use of these sights was not allowed in competitions calling for the straight military rifle. The foreigners showed a great appreciation for our own sterling military arm and used it with good results on many occasions. The same was true also of our revolvers. They were a fine lot of shots despite their handicap in arms.

The Canadians used the Ross rifle shooting the .303 British service cartridge. This rifle in certain respects was ahead of our own as a long range target arm. It had a much longer barrel, a fine target sight placed on the receiver near the eye, and therefore a very long and accurate sighting radius. But they were handicapped by their cartridge, which is out of date, being more of the class of our discarded Krag cartridge than that of our modern Springfield. An effort had been made to improve the regular British service cartridge by loading it with a 215-grain Ross pointed bullet and sufficient powder to give it about 2,400 feet velocity. The cartridge was very accurate, but was quite sensitive to wind deviation.

The Ross bullet is an extremely accurate one, being made in a unique manner. The steel (not cupro-nickel) jacket completely covers the entire bullet, including the base, the lead core being inserted from the point. The core does not extend quite up to the extreme point, leaving a slight air space there which makes for a much better balanced bullet. By means of a number of small hammers working in a machine the jacket, after the insertion of the core, is drawn into a point and welded, thus making it a complete and continuous covering to the core. This makes a bullet having a perfect balance and perfect base, the two essentials in an accurate projectile.

These bullets seem to be more accurate than those manufactured as ours are, and our Ordnance Department is already taking up the manufacture of them. Our bullets are at present all jacketed with cupro-nickel, but, owing to the difficulty of obtaining a good grade of this metal, and also the fact that such jackets cause considerable metallic fouling to adhere to the bore, it is believed that the use of this metal for bullet jackets will soon be abandoned in favor of a bronze or copper composition.

In the perfection of modern ammunition, the use of the sling-strap and the greased bullet, in the standard prone position, in the accurate adjustment of the sights, and in many other matters our sportsmen can with profit copy the methods of our best military shots.

WHISKERS VS. SNOW-BLINDNESS

THE Old-Timer explained his half-grown beard by saying that winter was coming on and he was letting it grow "because the man who wears whiskers don't go snow-blind." He couldn't say exactly why, but he insisted that, in many years of woods experience, he had noticed that while the smooth-shaven were frequently afflicted, the wearers of full beards, and even the merely mustachioed, were generally immune. He thought it was because the hair on lip and cheek intercepted the light which otherwise would be reflected from the snow directly upward and against the inner side of the upper eyelid. The writer, though frequently and protractedly exposed to this malady, has never contracted it. Whether his habit of letting nature take its course in the matter of facial forestation is what has saved him he don't know, nor is he willing to condemn himself to daily hard labor in order to find out.

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THE TRAIL TO YESTERDAY

By CHARLES ALDEN SELTZER

Author of "The Two Gun Man," "The Coming of the Law," etc.

SYNOPSIS OF PREVIOUS CHAPTERS

MISS SHEILA LANGFORD, on her way to her father's ranch, loses her way, and night and storm come on. A stranger meets her and takes her to his shack. On learning her name the stranger, who calls himself "Dakota," shows strong emotion. A preacher who has also lost his way comes to the shack, and Dakota forces Sheila to marry him under a threat of killing the preacher if she does not. Immediately afterwards she goes on to the ranch, where she learns from Duncan, the manager, that he suspects Dakota and Ben Doubler, an old man, of being cattle rustlers. Sheila sees Dakota shoot Blanca after a quarrel in which the latter is given first shot. Sheila is caught in quicksand while trying to ride her pony across a ford and is dragged out by Dakota. Sheila rides home on Dakota's pony, and when Duncan later returns the pony to Dakota the two men quarrel. Sheila meets Ben Doubler and her father goes to Dakota with an offer to the latter if he will get rid of Doubler. Dakota agrees to the proposal. Sheila learns of this bargain through Duncan and Duncan also warns Doubler of the plot to put him out of the way. Sheila meets Dakota on the river trail coming from Doubler's cabin and later finds the latter shot in the back. She starts for the doctor and again meets Dakota, who insists on going in her place although she accuses him of shooting Doubler. Sheila finds the memorandum of the bargain between Langford and Dakota and confronts the former with it. Langford seizes it and destroys it and is about to attack Sheila, who has declared her intention of leaving at once for the East, when Dakota appears and denounces Langford. Then he leaves with Sheila, who is returning to Doubler's cabin to nurse the old man.

CHAPTER XV

Sheriff Allen Takes a Hand

"I'LL be leaving you now, ma'am." There was a good moon and its mellow light streamed full into Dakota's grim, travel-stained face as he halted his pony on the crest of a slope above the Two Forks and pointed out a light that glimmered weakly through some trees on a level some distance on the other side of the river. "There's Doubler's cabin, where you see that light. You've been here before, and you won't get lost going the rest of the way alone. I'm going down to my shack; I've done a heap of riding to-day, and I reckon Doubler'll get along a whole lot better if I don't hang around. At least he'll do as well."

Sheila turned her head from him. He was exhibiting a perfectly natural aversion to visiting the man he had almost killed, she assured herself with a shudder, and she felt no pity for him. He had done her a service, however, in appearing at the Double R at a most opportune time, and she was grateful. She lingered, finding it hard to choose words.

"I am sorry," she finally said.

"Thank you." He maneuvered his pony until the moonlight streamed in her face. "I reckon you're of the same mind about the shooting of Doubler as your father," he said; "you think I shot him."

"Of course," she said slowly.

"Well," he said with a bitter laugh, "it does look bad for me, for a fact. And I don't blame you for thinking like you do. I've done some things in my life that I've regretted, but I've never told a lie when the truth would answer as well. There's no reason now why I should lie, and so I want you to know that I'm telling the truth when I say that I didn't shoot Doubler. Don't you believe me?"

"No," she said. "You were at Doubler's cabin when I heard the shot—I met you on the trail. You killed that man in Lazette—for nothing. You killed Doubler—for money. You would have killed my father if I had not prevented you. Perhaps you can't help killing people. You have my sympathy on that ac-

This story began in the June OUTING

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count. However, I don't believe you."

"You forgot to mention one other crime," he reminded her in a low voice.

"I did not forget it—I will never forget. But I forgive you; compared to your other crimes your sin against me was trivial — though it was great enough."

Again his bitter laugh reached her ears. "I thought——" he began, and stopped short. "Well, I reckon it don't make any difference to you what I thought. I'll be seeing you again before long, and then maybe I'll be able to explain."

"I am leaving this country to-morrow," she informed him coldly.

She saw him start.

"Well," he said gravely, "that's too bad. But I reckon I'll be seeing you again anyway, if the sheriff don't get me."

"Do you think they will come for you —to-night?" she questioned, suddenly remembering that her father had told her that Duncan had gone to Lazette for the sheriff. "What will they do?"

"Nothing, I reckon. That is, they won't do anything but take me into custody. They can't do anything until Doubler dies."

"If he doesn't die?" she said. "What can they do then?"

"Usually it ain't considered a crime to shoot a man—if he doesn't die. Likely they wouldn't do anything to me if Doubler gets well. They might want me to leave the country. But I don't reckon I'm going to let them take me —whether Doubler dies or not. Once they've got a man it's pretty easy to prove him guilty—in this country. Usually they hang a man and consider the evidence afterward. I ain't letting them do that to me."

Sheila was silent; he fell into a silence, too, and looked gravely at her.

"Well," he said presently, "I'll be going." He urged his pony forward, but when he had gone a few steps he looked back at her. "Do your best to keep Doubler alive," he said.

There was a note of the old mockery in his voice that lingered long after she had watched him disappear into the shadows of the trail. Stifling a sigh of regret and pity she spoke to her pony and the animal shuffled down the slope, forded the river, and so brought her to the door of Doubler's cabin.

The doctor was there; he was bending over Doubler at the instant she entered the cabin, and he looked up at her with grave, questioning eyes.

"I am going to nurse him," she informed the doctor.

"That's good," he said softly; "he needs lots of it."

Then he went off into a maze of medical terms and phrases that left her confused, but out of which she gathered the fact that the bullet had missed a vital spot, that Doubler was suffering more from shock than from real injury, and that the only danger—his constitution being strong enough to withstand the shock—would be from blood-poisoning. He had some fever, he told Sheila, and he left a small vial on a shelf with instructions to administer a number of drops of its contents in a spoonful of water if Doubler became restless. The bandages were to be changed several times a day and the wound bathed. He was glad she had come, for he had a very sick patient at Dry Bottom. He would stop on his way back to Lazette. No, he said, in answer to her question, she could not leave Doubler to-morrow, even to go home, if she wanted the patient to get well.

And so Sheila watched him as he went out and saddled his horse and rode away. Then she sighed and returned to the cabin to take up her vigil beside the nester.

. . . . .

The sheriff's posse—three men whom he had deputized in Lazette, and himself—had ridden hard over the twenty miles of rough trail from Lazette, for Duncan had assured them that they would have to get into action before Dakota could discover that there had been a witness to his deed, and therefore when they arrived at the edge of the clearing near Dakota's cabin at midnight they were glad of the opportunity to dismount and stretch themselves.

There was no light in Dakota's cabin, but a careful examination of the horses in the corral resulted in the discovery

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of one which had evidently been ridden hard and unsaddled but a few moments before, for its flanks were in a lather and steam poured from its sides.

However, the discovery of the pony told them nothing beyond the fact that Dakota had ridden to the cabin from somewhere, some time before. Whether he was asleep or watching them from some vantage-point in the cabin was not clear, and Ben Allen, the sheriff, a man of much experience, advised caution. Telling his deputies to remain at the edge of the clearing, he proceeded boldly to the door of the cabin and knocked loudly. He and Dakota had been very friendly.

"Sorry, Allen," came Dakota's voice, "but I'm locked up for the night."

"Sorry, too," Allen grinned at the door. "I told the boys you'd be watching. Coming out in the morning?"

"Maybe. Missed my beauty sleep already." His voice was dryly sarcastic. "You and your boys flop outside. We'll swap palaver in the morning. Good-night."

"Good-night." Allen returned to the edge of the clearing, where he communicated to his men and Duncan the result of his conference.

"He ain't allowing he wants to be disturbed just now," he told them. "And he's too polite to monkey with. We'll wait. Likely he'll change his mind overnight."

"Wait nothing," growled Duncan. "Bust the door in."

Allen grinned mildly. "Good advice," he said quietly; "you do the busting."

"If I was the sheriff——" began Duncan.

"Sure," said Allen dryly, "if you was the sheriff. There's lots of things we'd do if we was somebody else. But we don't want any killing if we can avoid it. If you're wanting to do something to help this game along swap your cayuse for one of Dakota's and hit the breeze to the Double R for grub—we'll be needing some by the time you get back."

Duncan had already ridden over sixty miles within the last twenty-four hours, and he made a grumbling rejoinder, but in the end he roped one of Dakota's horses, saddled it, and disappeared up the trail toward the Double R. Allen and his men built a fire near the edge of the clearing and rolled into their blankets.

At eight o'clock the following morning Langford appeared on the river trail, leading a pack-horse, loaded with provisions and cooking utensils for the sheriff and his men. Duncan, he told Allen while they breakfasted, had sought his bunk, tired out.

"You're the owner of the Double R?" questioned Allen.

"You and Dakota friendly?" he questioned again, noting Langford's nod.

"We've been quite friendly," smiled Langford.

"But you ain't now?"

"Not since this has happened. We must have law and order, even at the price of friendship."

Allen nodded shortly. "You say Doubler's dead?"

"I don't remember to have said that to you. Duncan saw him killed and came to me with the news. I sent him for you. Since then my daughter has been over to his cabin. He was quite dead, she reported," he lied. "There can be no doubt of his guilt, if that is what bothers you," continued Langford; "Duncan saw him shoot, and my daughter heard the shot and met Dakota coming from Doubler's cabin immediately after."

Langford had been greatly puzzled since Duncan had come to him with the news that Sheriff Allen was holding Dakota captive in the latter's cabin. Dakota knew that he had sent Duncan for the sheriff, and Langford had expected Dakota to leave the country. Why had he not done so?

He put this interrogation to Allen. "That's what's bothering me," said the latter. "Though," he added, squinting at Langford, "Dakota ain't never been much on the run. Darn the cuss!" he exploded impatiently.

He finished his breakfast in silence and then again approached the door of Dakota's cabin.

"I'm wanting that palaver now, Dakota," he said.

He heard Dakota laugh. "Have you viewed the corpse, Allen?" came his voice, burdened with mockery.

"No," said Allen.

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"You're a fine sheriff — wanting to take a man when you don't even know whether he's done anything."

"I reckon you ain't fooling me none," said Allen slowly. "The evidence is dead against you."

"What evidence?"

"Duncan saw you fixing Doubler, and Langford's daughter met you coming from his cabin."

"Who told you that?" came Dakota's voice sharply.

"Langford. He's just brought some grub over."

The silence that followed Allen's words lasted long, and the sheriff fidgeted impatiently, and when he spoke again there was the sharpness of intolerance in his voice.

"If taking you was all I had to do I might monkey around here all summer," he said. "I've give you about eight hours to think this thing over, and that's plenty long enough. I don't like to get into no gun-argument with you, because I know somebody'll get hurt. Why don't you surrender decently — them's good boys I got with me, and I don't want of any of them perforated. And I'd hate like blazes to have to put you out of business. Why don't you come out?"

"Go and look at the corpse," insisted Dakota.

"There'll be plenty of time to look at the corpse after you're took."

There was no answer. Allen sighed regretfully. "Well," he said presently, "I've done what I could. From now on I'm looking for you."

"Just a minute, Allen," came Dakota's voice. To Allen's surprise he heard a fumbling at the fastenings of the door, and an instant later it swung open and Dakota was framed in the opening, one of his six-shooters in hand. "I reckon I know you well enough to be tolerably sure that you'll get me before you leave here," he said, as Allen wheeled and faced him, his arms folded over his chest as a declaration of his present peaceful intentions. "But I want you to get this business straight before anything is started. I'm giving it to you straight. Somebody's framed up on me. I didn't shoot Doubler; when I left him he was cleaning his rifle. After I'd left him a while I heard shooting. I thought it was Doubler trying his rifle. Then I met Sheila Langford on the trail. She'd heard the shooting, too. She thinks I did it. You think I did it, and Duncan says he saw me do it.

"Doubler ain't dead; at least he wasn't when I left him right after sundown. But he wasn't far from it, and if he dies without coming-to it's likely that things will look mighty bad for me. I reckon I might have lit out if I was guilty, for I heard some time ago that you was coming for me. But I knew Doubler wasn't dead, and so I took a chance on staying here. I ain't allowing that I'm going to let anyone hang me and so if you're determined to get me without making sure that Doubler's going to have mourners immediately it's a dead sure thing that some one's going to get hurt. I reckon that's all. I've given you fair warning and after you get back to the edge of the clearing our friendship don't count any more."

He stepped back and closed the door.

Allen walked slowly toward the clearing, thinking seriously. He said nothing to Langford or his men concerning his conversation with Dakota; though he covertly questioned the former he could discover nothing more than that which Langford had already told him. Several times during the morning he was on the point of planning an attack on the cabin, but Dakota's voice had had the ring of truth, and he delayed.

And so the hours dragged. The men lounged in the shade of the trees and talked; Langford — though he had no further excuse for staying—remained, concealing his impatience over Allen's inaction by taking short rides, but always returning, Allen, taciturn, morose even, taking no notice of him.

The afternoon waned; the sun descended to the peaks of the mountains, and there was still inaction on Allen's part; still silence from the cabin. Just at sundown Allen called his men to him and told them to guard the cabin closely, not to shoot unless forced by Dakota, but to be certain that he did not escape. They might expect him to return by dawn the following morning. Then,

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during Langford's absence on one of his rides, he loped his pony up the river trail toward Ben Doubler's cabin.

. . . . .

After the departure of the doctor Sheila entered the cabin and closed the door, fastening the bars and drawing a chair up near the table.

Doubler seemed to be resting easier; he breathed more regularly and with less effort, though there was a flush on his cheeks that told of the presence of fever. At intervals during the night she gave him quantities of the medicine that the doctor had left, but only when the fever seemed to increase, forcing the liquid through his lips. Several times she changed the bandages, and once or twice during the night when he moaned she pulled her chair over beside him and smoothed his forehead, soothing him. When the dawn came it found her heavy-eyed, tired.

She went to the river and procured fresh water, washed her hands and face, prepared a breakfast of bacon and soda-biscuit—which she found in a tin box in a corner of the cabin—and then, as Doubler seemed to be doing nicely, she saddled her pony and took a short gallop. Returning, she entered the cabin, to find Doubler tossing restlessly. She gave him a dose of the medicine—an extra large one—but it had little effect, quieting him only momentarily. Evidently he was growing worse. The thought aroused apprehension in her mind, but she fought it down and stayed resolutely at the sick man's side. Through the slow-dragging hours of the morning she sat beside him, giving him the best care possible under the circumstances, but in spite of her efforts the fever rose steadily, and at noon he suddenly sat up in the bunk and gazed at her with blazing, vacuous eyes.

"You're a liar!" he shouted. "Dakota's square!"

Sheila stifled a scream of fear and shrank from him. But recovering, she went to him, seizing his shoulders and forcing him back into the bunk, and though he did not resist, not seeming to notice her, he mumbled: "It ain't so, I tell you! He's just left me, an' any man that could talk like he did—I reckon not," he shook his head negatively. "You've been a heap mistaken."

He was quiet for a time after this, but toward the middle of the afternoon Sheila saw that his gaze was following her as she paced softly back and forth in the cabin.

"So you're stuck on that Langford girl, are you?" he demanded, laughing. "Well, it won't do you any good, Dakota; she's——" The laughter died out of his eyes; they became cold with menace. "I ain't listenin' to any more of that talk—I've got my eyes open. Why!" he said in surprise, starting up, "he's gone!" He suddenly shuddered and cursed. "In the back," he said; "you—you——" Then he collapsed, closing his eyes, and lay still.

Out of the jumble of disconnected sentences Sheila was able to gather two things of importance—perhaps three.

The first was that someone had told him of Dakota's complicity in the plan to murder him and that he refused to believe his friend capable of such a crime. Second: he knew who had shot him, and third: he also knew the man who had informed him of Dakota's duplicity—though this knowledge would amount to very little unless Doubler recovered enough to be able to supply the missing threads.

She despaired of his supplying anything, for it seemed he was steadily growing worse, and when the dusk came she began to feel a dread of remaining in the cabin with him during the night. If the doctor would only return; if Dakota would come—Duncan, her father—anybody! But nobody came, and the silence around the cabin grew so oppressive that she felt that she must scream. When the darkness succeeded the dusk she lighted the kerosene lamp, placed a bar over the window, secured the door fastenings, and seated herself at the table, determined to take a short nap. It seemed that she had scarcely dropped off to sleep—though in reality she had been asleep for more than two hours—when she awoke suddenly, to see Doubler sitting erect in the bunk, watching her with a wan, sympathetic smile. There was the light of reason in his eyes and her heart gave an ecstatic leap.

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"Could you give me a drink of water, ma'am?" he said. She sprang to the pail, to find that it contained very little, and, lifting it, she was about to unfasten the door, intending to go to the river for the purpose of refilling it, when Doubler's voice arrested her.

"There's some water left there—I hear it splashin'. It'll do well enough just now. You can get some fresh later. I want to talk to you."

She placed the pail down and went over to him. "What is it?" she said.

"How long have you been here? I knowed you was here all the time—I kept seein' you, but somehow things was a little mixed. You've been here quite a while."

"This is the second night."

"You found me layin' there—in the door. I dropped there; not bein' able to go any farther. I felt you touchin' me—draggin' me. There was someone else here—who?"

"The doctor and Dakota."

"Where's Dakota now?"

"At his cabin, I suppose. He didn't stay long. You know why, I imagine. He was afraid you would recognize and accuse him."

"Accuse him of what, ma'am?"

"Of shooting you."

He smiled. "I reckon, ma'am, that you don't understand. It wasn't Dakota that shot me."

"Who?" she questioned eagerly. "Who?"

"Duncan."

"Why—why"—she said, sitting erect, a sudden, mysterious elation filling her, her eyes wide with surprise and delight—and a fear that Doubler might be mistaken—"why, I saw Dakota on the river trail just after you were shot."

"He'd just left me. He hadn't been gone more than ten minutes or so when Duncan come—ridin' out of the timber just down by the crick. Likely he'd been hidin' there. I was cleanin' my rifle; we had words, an' when I set the rifle down just outside the shack he grabbed it an' shot me. After that I don't seem to remember a heap—except that someone was touchin' me—which must have been you."

"Oh!" she said, "I am glad!" She was thinking now of Dakota's parting with her the night before on the crest of the slope above the river—of his words—the truth of his statement denying his guilt, and she was glad that she had not said some of the spiteful things that had been in her mind.

"I reckon it's somethin' to be glad for," smiled Doubler, misunderstanding her; "but I reckon I owe it to you—I'd have pulled my freight sure if you hadn't come."

"You're going to live a long while," she said. And then, to his surprise, she bent over and kissed his forehead, leaving him instantly, her cheeks aflame, and seizing the water-pail.

"I'll get some fresh water," she said, with a quick, smiling glance at him. "You'll want a fresh drink, and your bandages must be changed."

She opened the door and stepped down into the darkness.

There was a moon, and the trail to the river was light enough for her to see plainly, but when she reached the timber clump where Doubler had said Duncan had been hiding she shuddered and made a detour to avoid passing close to it. This took her some distance out of her way and she reached the river and walked along its bank for a little distance, searching for a deep, accessible spot into which she could place the pail.

The shallow crossing over which she had ridden many times was not far away, and when she stooped to fill the pail she heard a sudden clatter and splashing, and looked up, to see a horseman riding into the water from the opposite side of the river. He saw her at about the instant she had discovered him, and once over the ford he gained the bank and rode toward her.

He halted his pony and gazed intently at her. "You're Langford's daughter, I reckon," he said.

"Yes," she said, seeing that he was a stranger; "I——"

"I'm Ben Allen," he interrupted shortly—"the sheriff of this county. What you doin' here?"

"I'm nursing Mr. Doubler," she said. "He has been——"

"Then he ain't dead, of course," said Allen, again interrupting her. It seemed

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to Sheila that there was relief and satisfaction in his voice, and she peered closer at him, but his face was hidden in the shadow of his hat-brim.

"He is very much better now," she said. "But he has been very bad."

"Able to talk?"

"Yes. He has just been talking to me." She took a step toward him, speaking earnestly and rapidly. "I suppose you are looking for Dakota," she said, remembering what her father had told her about sending to Lazette for the sheriff. "I want to tell you that Dakota didn't shoot Doubler—it was Duncan. Doubler told me that not five minutes ago. He said——"

But Allen had spurred his pony forward, and before she could finish he was out of hearing distance, riding swiftly toward the cabin.

Sheila lingered at the water's edge, for now suddenly she saw much beauty in the surrounding country; she was no longer lonesome; she gazed long at the beauty of the distant mountains, their peaks rising majestically in the luminous mist; at the plains, stretching away and fading into the mysterious shadows of the distance; watching the waters of the river, shimmering like quicksilver—a band of glowing ribbon winding in and out and around the moon-touched buttes of the canyons.

"Oh!" she said irrelevantly, "he isn't so bad—after all!"

Stooping over again to fill the pail, she heard a sudden clatter of hoofs behind her. A horseman was racing toward the river—toward her—bending low over his pony's mane, riding desperately. She placed the pail down and watched him. Apparently he did not see her, for, swerving suddenly, he made for the shallow crossing without slackening speed. He had almost reached the water's edge when there was a spurt of flame from the door of Doubler's cabin—the sharp, whip-like crack of a rifle! A man stood in the door, and she heard the sighing of a bullet; heard the horseman curse. But in the next instant he had crossed the river; she saw him for an instant as he was outlined against the sky in the clear moonlight. And then he was gone.

Dropping the pail, Sheila ran toward the cabin, fearing that Doubler had suddenly become delirious and had attacked Allen. But it had seemed to her that it had not been Allen who had raced away from the cabin, and she had not gone half-way toward it when she saw another horseman coming. She halted to await him and when he drew up beside her she saw that it was the sheriff.

"Who was it?" she demanded breathlessly.

"Duncan." Allen cursed profoundly. "When I got to the cabin he was strangling Doubler—the skunk! You was right," he added; "it was Duncan who shot Doubler." He continued rapidly, grimly, taking a piece of paper from a pocket and writing on it. "My men have got Dakota corraled in his cabin. If he tries to get away they'll do for him. I don't want to have that happen—there's too few square men in this country as it is. Take this"—he held out the paper to her—"and get down to Dakota's cabin with it. Give it to Bud—one of my men—and tell him to scatter the others and try and head off Duncan—if he goes that way. I'm after him."

The paper fluttered toward her, she snatched at it, missed it, and stooped to take it from the ground. When she stood erect she saw Allen and his pony silhouetted for an instant on the crest of the ridge on the other side of the river, Then he disappeared.

(*To be continued*)

Dartmouth has added a new thing to college life—a Winter Sports Carnival. Read about it and about the Winter life of this New England college in January OUTING.

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KEEPING WARM IN THE WINTER CAMP

By WARWICK STEVENS CARPENTER

Simple Facts About Building Camp-fires and Selecting Stoves for Outdoor Living in Cold Weather

IN winter in the open tent or lean-to you will conserve as much heat from the camp-fire as possible. That which goes up is lost, but it can be reduced to a minimum by placing the fire as close to the front of the camp as possible and having a rather steeply pitched roof which will catch and reflect the heat-waves that go diagonally upward. The heat that would ordinarily spread on the side farthest from the camp can be thrown almost entirely backward into the structure.

The fireplace must have a reflecting back, which is constructed by standing two heavy green sticks in front of the shelter, as close to it as it will be possible to have the fire, and with their tops inclined slightly away from the shelter. Brace them behind with forked sticks, and against their front pile green logs to a height of three feet or more. The fire will be built against these front logs. Better than this reflecting back, face the camp against a big rock if one is available.

Wood that has been long dead and subjected to moisture will be partially decayed and will have lost much of its heat. Fire is simply a rapid decomposition of the substance into its elements, with resulting heat, and it is accordingly obvious that if much of this decomposition has already taken place the heat will be reduced.

There is more heat in green wood, when once it is properly burning, than in old, partly decayed dead wood, but even the latter is good when the fire is well started, and it will often be easy to find. But be sure to have a quantity of green birch, beech, or maple to pile on the fire before crawling into bed. It will keep going for much of the night.

Getting a fire started easily and well is the mark of a woodsman. Your amateur will be hurried in his preparations. The woodsman proceeds with apparent leisure, searching about in the surrounding woods and even going some little distance from camp, until he has found just the sort of kindling which he wants. He will pull bark from the trunks of birches, a considerable quantity of it, and break off the dry stubs around the butts of the spruces. The branches from a dead evergreen or from the bottom of a live tree, which are thick with brown withered needles, give a quick, fierce heat. Perhaps a dry stub can be found that can be split into kindling, and it may be that a down soft-wood tree will furnish similar material. In the absence of birch bark or of branches with dry needles, the dry dead branches and other soft wood may be whittled into shavings with a pocket-knife.

Be sure that you have a considerable quantity of this preliminary material and that coarser wood is ready at hand. Then lay the shavings and fine tinder against the big logs and place dry, fine wood over them. Build it up in a sort of rough crib or framework with air space between. The greatest need of a fire, next to fuel, is for air.

In doing this remember one of the fundamental characteristics of fire, that it is a natural climber. The little flames shoot upward, and if they have nothing to play upon their energy is lost. Accordingly have enough fine, dry material above your kindling to catch the first feeble flames of your fire and convert

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them into more fire. When all is in readiness, and not before, apply the match.

Now watch the fire gather headway. It will spread rapidly through the bark and tinder and lick upward over the fine cribbing. Here and there a little flame will break out between the sticks and shoot skyward, with nothing above it. Be ready with other small stuff to close up the gap, not fully, but just enough to catch the energy of that fugitive flame. As the fire gains headway add other fine wood. Then presently you can begin with the coarser. If you have gathered your material intelligently and laid the ground-work with craft you will have a full-fledged camp-fire in a very few minutes.

But here should be added another characteristic of the fire. A fire loves organization. Fire rouses fire, and heat from each little stick sets its brothers aglow. Give it plenty of time to do this. Too often the novice will putter and poke until his fire is discouraged and dies utterly. Give it a fair chance. The time will come soon enough when its close organization will have burned out its heart and a revolution must take place. Then supply your agitation with intelligence and plan, with proper regard for the fire's tendency to climb, for its need of organization, and for the addition of new material.

The cooking-fire differs materially from the fire intended solely for heating. A fire which consists largely of roaring, crackling flames is not only harder to work over, but gives a very uncertain heat. One moment it will set your pot to boiling furiously, or will heat the frying-pan until the grease catches fire and burns the contents to a cinder. In a moment more it will have died down so that you have to lower the pot or add fresh fuel. The ideal cooking-fire consists chiefly of coals, with very small flames, so that the conditions of the stove are approximated. It will be still more convenient if there is a large log in front as well as behind to throw the heat more directly upward.

These conditions you may get in the open winter camp by raking a part of the larger fire to one side of the fireplace. Thus you will have everything from a bed of coals to the actively flaming wood, and you can replenish the coals from time to time by raking out others. Green wood makes excellent coals, but if you can get some of the bark from a dead hemlock tree put that on your cooking-fire. It will make a hot, lasting bed which will not smoke.

The most important adjunct of the fire for cooking is a suitable crane to support the kettles. The simplest arrangement is that of a long pole slanting over the fire, on the end of which a kettle may be suspended. Place the pole to one side, with its butt under a heavy log, and place another log or a forked stick under the pole at a point which will raise the tip just high enough above the fire. It may even be possible to drive the butt into the snow to one side of the fire, but the snow is likely to give at an unfortunate moment.

Hanging the Crane

The most satisfactory crane is made by standing two forked sticks upright in the snow at each side of the fire and laying a long pole in their crotches so that it passes over the fire. If the snow is too soft the supports may be braced at either side. The kettles may then be slipped on this pole from either end. They will be hard to get at, however, and cannot be raised or lowered to suit the need. Instead of hanging them directly on the pole it is better to cut several forked sticks with one side of the forks only three or four inches long and the other side from a foot to two feet in length. At the lower end of the longer side cut a deep notch with a knife, in which to suspend the bale of the kettle. The other side of the crotch can then be hooked over the pole on the crane and removed at will. By having several forked sticks of various lengths the kettle may be raised or lowered and thus made to boil slow or fast. It can also be moved to one side of the crane, away from the intense heat of the fire, where its contents may be kept hot until everything is finished.

Stoves for camp use are of many kinds. There are small box stoves made of light-

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weight sheet-iron, with one or two lids, the stove-pipe for which may be taken apart and packed inside the stove. Others have telescopic pipes with the largest section at the base and the smallest at the top, the upper sections of which collapse inside the base section much like the sections of a collapsible drinking-cup. Then there are folding stoves, the sides of which are hinged, so that they may be folded flat.

They come with and without legs, and some are made even without bottoms. These latter must be placed flat on the ground. They may be bought of most sporting goods dealers, or any camper can easily design one for himself and have it made by any tinsmith. The pipe may be as small as four inches in diameter. A mere sheet-iron box without a bottom or lids will be cheap and very satisfactory for heating. A slide in one end to receive the wood will serve as a door. It can be lifted up slightly for a draught. In the other end there should be a collar to receive the pipe. This collar may be extended into the stove for a couple of inches and thus do away with projections on the outside.

Another form of stove very convenient for heating the inside of the tent can be made in the form of a cone, the top of which is continued into the stove-pipe. Have a door hinged on to receive the wood. A very small stove of this sort will prove a tremendous heater for your tent.

Another stove, somewhat similar, can be bought at the dealers, but instead of being made in the form of a cone it is a small cylinder of sheet-iron with a top and one lid and a slide for a door. It is an excellent heater and the lid adapts it for cooking. It has no bottom and the cooking outfit and other articles may be packed inside.

Then there are kerosene, gasoline, and alcohol stoves, which are excellent for cooking. Some of them are also fairly good heaters. Their styles and merit are many, and I shall not attempt to discuss them here. Look them up in the catalogue of any good dealer and take one that seems to best suit the purpose and that is guaranteed, provided you are to be in a place where it is impossible to obtain wood. But if you may rely upon wood by all means do so, as it saves space and is a far better heater, besides being infinitely more cheerful.

In the January OUTING Mr. Carpenter follows this article with an equally sensible and practical one on SHELTERS AND BEDS IN THE WINTER CAMP.

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MY FIRST SALMON

By GERTRUDE BUFFINGTON PHILLIPS

A Woman's Story of Her First Meeting with the King of Newfoundland Waters

SALMON-killing in the far rough countries has always been considered a man's work. True, many women have caught many salmon, but most of them have been ably abetted by big husbands, brothers, and friends. This is the story of adventures in search of them alone—the narrative of a novice, and if I got excitement and met misfortune, well — I laid myself open to it.

Because the Newfoundland streams and pools are the best they were my choice, and with an outfit selected according to the best print authorities, plus my own more adequate knowledge in hunting lake trout, bass, tarpon, muskellunge, etc., I landed in quaint old fish-odoriferous St. John's, and bumped forthwith into a fountain of salmon wisdom in the person of an old enthusiast just from the pools. He was little, short, and fat, and I first saw him one sunset as he sat swinging his bandy legs from the parapet at the top of the ascent to the squat old cathedral that wards over the sleepy town. This is the queer but illuminating lecture he delivered on salmon—truly the best I have ever heard:

"Miss, them is the fish of mystery. They is the gypsies of the salt and fresh water, contrary as you women, and got a memory like a Scotchman. I run an engine on the Erie all year long just to get enough extra money to come up here and let them make faces at me. You say you never took one yet? Well, let me tell you a little bit about them, leastways these fellers in Newfoundland and the Maritime Provinces. Maw Salmon gets the family idea just about the time we begin to eat strawberries in New York. The first piece of strawberry shortcake you see it's time to shellac the roughed spots on your salmon rod and put your fly books in order.

"What Paw Salmon is thinking and doing nobody seems to know. Some says they make a honeymoon journey up from the edges of deep water around the coast to the mouths of the rivers and pick their way slowly from salt to brack water, then carefully on to fresh. Maybe they come together and maybe they come alone, but in a run of little falls that tumbled down over limestone breaks for half a mile I have seen a pair, male and female, shooting up the falls one after the other, the lady first, which shows their manners.

"Mother Bass makes a nest like a sunfish and keeps it fanned clean with her tail and chases away snakes and other fish that would come to eat up the eggs, but Maw Salmon is more keerless or more cunning. She hunts up the warm, no'theast side of some shallow pool, usually a place where there's nothing growing down close to the water's edge, and lays the eggs back and forth and round and round. Mighty often they will be under a mass of sticks or weeds that has the top up in the sunshine in the afternoon. I figger some of the radiation runs down the sticks to help the hatching. But likely as not she won't bother with no sticks or grass. When the eggs is deposited she's through, and goes off to a matinee and never comes home. I don't care what the books say, I tell you she don't. When you see her hanging round a nest, it's because she ain't through, not because her maternal instinct, as they call it, keeps her on guard.

"Baby Salmon must have an awful time to grow up. There's more things to ketch and eat him ten times over in them salmon streams than they is where bass

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spawn. But he does keep alive; that is, some of him. He begins to stretch out and toughen up, and soon he is a lively young grilse.

"Now, don't never waste no time trying to figger out why it is some of them stay in their native haunts eighteen months, and some for years, before they git that I-got-to-go-to-sea feeling. For that matter, why do they ever go down to sea? Think of that. They don't have to. There's plenty of good water and plenty of good eatings where they are. It isn't a matter of weather or ice at all—it's just finniness in the mind, pure feminine mysteriousness, but one day Baby Salmon, having become young Mister Grilse, is struck like the young Irishman who said he'd lately took the notion that he'd cross the briny ocean. He just starts down-stream a sky-hooting. All the way he has a good time, going into the air for fun whenever he feels like it, and he never wastes any time till he strikes brack water.

"Now, what kind of a change comes over him that lets him get to be a salt water fish without breaking down his health? I want to know. But out he goes into tide water, and down, down, down the sloping roof of the big house under the sea, till nobody can't tell where he be any more. Two years, five years, eight years, maybe more, he stays, and then one day he takes a notion he'll go back to the old country, and him and his best girl start off. Now, my old Uncle McDuff, who has knowed salmon on the Evelex, Fleet, and Ullie waters for eighty-two years, sticks up to it that he has picked out that girl before they went to sea, and that the same one comes back with him. But, Miss, meaning no disrespect to my Uncle McDuff, that's too much for human folks, let alone fish.

"Of course, most people are sure that the grilse goes to sea and returns as a salmon to the very spot of his boyhood. It's a nice, poetic thing, if it ain't exactly scientific, and, anyhow, it proves another point in the argument on what strange, mysterious creatures they is.

"As to the angling, bless you, Miss, how I envy you all the fun you are going to have learning to know that you can never live long enough to learn all there is to the game. Go right away quick and begin, and there's only one thing I'm going to tell you, just one: cast across the wind and against the sunshine whenever you get a chance. Do it if you have to drown yourself to get into position. Good evening, Miss, and good luck on the Pools."

That one bit of counsel has ever been clear in my mind, but I bid any good fisherman with a memory for precise details in localities to run back to the times when he could achieve such a thing. They are rare indeed. For it is morning winds from the sea quartering on the sunshine track; calm around noon; and afternoon winds out of the west and northwest falling to calm at evening time. On gray days there is nothing but the wind to reckon with, and that is keen and damp from the ice fields and chill wastes of the Arctic current.

Easy Laws for the Fisherman

The strictures of the game laws in British territory, licenses, guides, and all that, deter many fishermen from leaving the United States, but there is little to block the salmon fisherman. The Customs require a refundable duty deposit on tackle taken in. The open season, from the 15th of January to the 15th of September, covers a period in the latter half of which only can he visit the Newfoundland streams in comfort. In the earlier part—huh—they even have the cow in the house up there. As to license, $10 is the cost of the piece of paper bearing the seal of the Inland Fishery Board.

Which reminds me of the remark made by a disgruntled tyro who had spent a week on the Exploits River:

"That piece of bond paper cost me ten bucks and gave me the unlimited privilege to the finest lot of open air calisthenics for the arms I ever had in all my life. But I tell you one thing, they don't need any game laws up here to protect their precious fish from *me*."

As often happens, my first incursion was the most satisfactory. I had pitched on the Little Codroy on account of its ready accessibility, which is a great item with a woman, though I am too proud to confess to any lack of courage before

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a long, rough hike or days of jolting on the wooden seat of a springless wagon. The railway runs down the narrow valley before the wonderful faces of the Cape Ray mountains, and when on the Pools almost any quiet hour I could hear the distant clatter and roar and the wailing whistle of a passing train.

At the time I went out the coaches looked like the assemblage of all the mad enthusiasts from the Sportsmen's Show. There were parties and parties, and yet more parties, but station by station they melted away, till at last I realized that in those vast, lonely regions the entire population of New York City could go fishing at one and the same time without crowding. Having left St. John's in the early evening, the whole train-load, almost, dwindled down till there was nothing left to distract one's attention from the marvelous scenery of the next day's crossing of the island. Though it was nine at night when I got down at Little River, having passed two or three hundred miles of the finest fishing waters in the world, there was still a blue glow of light from the west, and the scene was so enchanting that I had no misgivings or regrets for the possible fish left behind.

Out of the purple gloom, with the soft, swaying tread of the born canoeman, came a short, lithe, broad-shouldered man. He moved out of a group speaking a tongue I had never heard. It was pure Gaelic! Pulling his cap, he stood before me, speaking my name. He was my guide, one of a family of famous brothers and cousins who always figure large in the annual reports by the Game and Inland Fisheries Board of the trout and salmon taken.

Crude, clean, and comfortable was the place in which I slept, and when the pink and green dawn cut clear against the east the great bulk of Table Mountain, I was up and we were on our way to the Pools. In the heavy rains a month before there had been a slide of rocks and earth just above Kid's Pool, and soil was still dropping in every now and then, so that we rounded it past Country Path and came to the brink of Island Pool from the north.

When I had brought down my tackle before starting, my guide, losing the dull, sleepy look from his little blue eyes and, puffing more quickly on his short pipe, had walked around it two or three times, looking at it with sidelong glances, before he said at last:

"Tham bain't inssential—nowt all, Miss. One pound is ten eventime, Miss."

Everything had been bought and brought on advice, so most meekly I opened up my bandoliered rod case and my tackle box, and with fingers that were deft and sensitive for all their clumsy, stubby look, he had gone over every part. In the end there were two piles. In one was the bulk of my tackle, including the box. In the other was my second from heaviest, double-handed, full-agated rod, with a spare tip, a ten-fly book, a simple hundred-yard reel, and the small accessories which he palmed and scrutinized carefully before he knotted them in a big blue handkerchief for me to fasten to a loop at the belt of my short khaki skirt. Later I understood why he did not take even an extra rod section. When one broke he cut a section of a green withe, set the ferrules, and inserted it.

On the Pools

The chill of the morning still hung in the valley as we came into the second pool. The wind was gusty and with a March-like temper and sting. Setting up and rigging, I was soon on a broad shaly ledge that commanded the deeper water, and essayed my first cast, the guide, crouched low on the ground at my left, directing my efforts. Wielding a salmon-rod and an ordinary fly-rod have the differences that lie between using an axe and handling a hatchet, but conrol of the line and judgment of direction being the same, I was soon doing fairly well. Half an hour only brought, however, one silvery, quickly vanishing flash from behind a split boulder on the lower side.

Once the guide touched my arm with his pipe and pointed quickly. What he had seen I was too slow to catch, but it was salmon leaving the pool and going up. We, too, moved on to Tompkins Pool, finding indications that late the

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night before, or perhaps even that morning, someone had been there. I was getting my first comprehension of what it meant to traverse such broken bulks of rock.

The second cast I made across the head of the pool my fly, a Durham Ranger, was hovering at the limit when I heard the guide's breath indrawn sharply, and at the same instant saw what looked like a curving bolt of bright metal swing up with incredible speed from the cold, dark green depths. A whirl of spray and spindle and my drop-fly was gone, while the line was cutting down to the left. I struck in insane rapture—my good fortune was astounding. The barb went home somewhere in the jaw of one of the great fish of mystery.

If the pool had been broader I should never have turned him. Time and again I thought my tip or second section would go owing to my eager handling. Ten mad minutes and he began to sulk.

"He bain't a-wearied, Miss," chuckled the guide. "Change forefoot to rest yornself."

Game to the Last

Indeed, he was not wearied, for as soon as he realized that the new enemy that had bitten him was not to be conquered by such methods, he tried others and took the air. I could have shouted with joy when I saw that great body leaving the sunshine, but my teeth were too close set, and the only sound that issued was something akin to a strangling man's call for help. Some persons recommend a down and out draught on the line when the fish is leaping, but my habit is to slack as swiftly as possible while he is shaking his head and draw always to the left if possible when he strikes back into the water. How many times I did this, and how many times he tried to throw the hook from his mouth, I cannot tell. I had lost all track of time and all thought of anything else on earth except that beauty.

After a while I was able to bring him to my side of the pool, and at last he came to the top of the water without leaving it for the air. For the first time the guide looked about to see where he had dropped the gaff. It was thirty feet away. Leisurely he ambled over, filled and lit his pipe, picked up the gaff, and ambled back. He seemed to know just what my process was, as I realized with a sense of humiliation.

"Brang him by that yon bowder, Miss," admonished the guide.

I did so just an instant before the man leaped like a cat from the water edge, lit on the boulder, balanced, and struck down. My salmon was gaffed! Also I saw that my hook was fast and deep in his jaw, and I drew him out on the shingle and shale.

When the guide held him up, and I saw what a splendid specimen my first salmon was, and I had figured the man's estimates in stones and fractions into pounds, a silly smile came on my face. It was impossible, it was incredible! Without mishap and unaided I had landed my first salmon, one weighing more than twenty pounds. Then I knew I must have been a very long time doing it, but as I had not looked at my wrist-watch since leaving the lower pool, there was no way of telling. All I know is that the sun seemed an hour or two higher in the heavens, and it was getting hotter with a vengeance.

It was only with an effort that I recovered myself sufficiently to go on fishing. Also my casting was now hopeless, and I had more line and reel trouble than would come in an ordinary month.

Past Dugget's Pool, Tompkins Nose, Rock Pool, McQuarrie's Pool, Aggravation, and Long Turn Pools we went, reaching the latter without having hooked anything more. Tired as I was I would not give up till between us we had taken two grilse, which we did not gaff, but turned back. As a matter of fact, since that first salmon I have never gaffed one of the fish of mystery save as a means to saving tackle or when it was necessary to do so to land him at all.

It was nearly dark when we came to the Tompkins Inn. As soon as I had my smoking-hot supper, I tried to write a letter to a sister enthusiast about my first take, but when I came to with my face on the sheet and smeared with ink from nodding, I crawled into bed, face unwashed, and slept like a rock.

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THE COMPETENT BAKER

By KATHRENE GEDNEY PINKERTON

How the Camper May Have Good Bread, Pies, and Cakes in the Wilderness

A LARGE percentage of those who go into the wilderness for recreation do not take a reflecting baker. A larger percentage of those who take one do not realize its possibilities. To most it serves only to bake baking-powder biscuits.

With the baker and a proper fire one can make biscuits, breads, pies, puddings, cakes, and cookies, obtain savory roasts and browned potatoes, bake fish excellently, and, in fact, do almost anything with it that one may do in the oven at home except bake beans. These require a more intense heat.

Many do not realize the importance of the fire, for in the fire lies the secret of success with the baker. If you have much to bake and can afford the time, it is better to cut green poplar back-logs or to use large rocks. This insures a more intense heat and requires far less fuel.

Baking should never be started until you have obtained sufficient wood and have built your fire properly. If back-logs and andirons are used the fire may be so built that it rolls up the front, offering a well of flames to the baker. This affords a steady, intense heat, and the andirons allow the coals to fall down and throw their heat directly into the baker.

Never try to bake anything with a straggly, indecisive fire, the baker pushed tightly against one partially blazing log. One will never succeed in baking breads, biscuits, and pies until after he has discarded the common belief that the baker must be jammed into the blaze.

Spruce, tamarack, cedar, and balsam do not make suitable fuel for a baking-fire, as they crackle and throw cinders into the food.

The heat should be regulated by moving the baker, not by changing the fire. With biscuits and bread, which require a moderate heat at first, place the baker about twenty or more inches from the fire until they have risen. Then brown them by moving to within a foot of the blaze.

Success with baking-powder breads depends on the baking quite as much as on the mixing. They should never be hurried. They should always be started in moderate heat and allowed to rise fully before they brown. If they brown first they will rise no farther and will be a heavy, soggy mass. Baking-powder biscuits should never be baked in less than twenty or twenty-five minutes. Breads containing cornmeal require more time.

The number of hot baking-powder breads is almost unlimited. Among them are baking-powder biscuits, oatmeal biscuits, johnny-cake, graham gems, and brown bread. The recipes of all are in any cook-book. In camp cooking none of these biscuits need be rolled out, but can be dropped from a spoon into the pan. This improves them, as too much handling is not good for baking-powder doughs. A pleasant change may be obtained by using equal parts of oatmeal and white flour and proceeding as with baking-powder biscuits.

The bread supply offers the most difficult problem to campers. Excessive use of baking-powder results harmfully, while the raising of yeast bread requires a constant temperature almost impossible to obtain in the open. But the baker and sour-dough yeast solve the difficulty. Sour-dough bread will rise in any tem-

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perature above freezing, and will bake as well in the baker as in the oven.

A good ratio for bread-making follows: For each loaf of bread use one cup of "sourings," which has been made previously, one teaspoonful of sugar, half a teaspoonful of lard, one large teaspoonful of salt, and a quarter of a teaspoonful of soda, the last two dissolved in hot water. Into this mixture knead sufficient flour to make an elastic ball.

The procedure from this stage depends upon the amount of time at your disposal and your ambition. If you wish to break camp in the morning, make the ball at night, divide into loaves, allow them to rise overnight and bake at breakfast-time. If, however, you are to remain in camp next day, or even make a late start, you can improve the bread by allowing it to rise twice, once overnight in a ball and again after it is formed into loaves.

Bread should be baked an hour. In the first half hour the baker should be eighteen inches from the fire. The last half hour it should be nearer, that the bread may brown. If the bread, when baked, is grayish, you have used too much soda. The amount of soda must be varied with the sourness of the yeast.

Cookies, cakes, puddings, and pies arouse a vision of a well-equipped kitchen, eggs, butter, milk, a rolling pin, and a pastry board. But none of these is necessary. With a little ingenuity and the combination of a baker and the ordinary foodstuffs of a light pack-sack all may be obtained. A rainy day affords a wonderful opportunity to stock up on sweet things.

Pies may be rolled out on the bottom of a canoe with a bottle of "first aid" or pinched and patted out with the hands. If shortening is precious, a pinch of baking powder and a teaspoonful of sugar help to enrich the crust. Stewed dried fruits make an excellent substitute for fresh. A combination of cooked raisins and dried apple sauce is good.

The number of puddings which one may have is limited only by his imagination. Roughly speaking, they may be divided into two classes. The first are made of a combination of stewed dried fruits, evaporated eggs, and any foundation, such as cornmeal, breakfast cereals, rice, bread-crumbs, and instantaneous tapioca. The second are of stewed dried fruits and rich biscuit dough made in the form of dumplings, layer puddings, or rolls. All may be baked in a baker, the latter requiring forty minutes.

Cakes can be made easily and well in the baker. The big-four cake of the woods is very simple. Cream together one cup of lard and two cups of sugar. Add a cup of water. Stir in sufficient flour, to which has been added a pinch of salt and two rounded teaspoonfuls of baking powder to make a cake dough. Season with any of the spices or extracts. This should be baked in moderate heat and allowed to rise before it is browned. The same mixture is made into cookies by using sufficient flour to make a dough which can be rolled out. Cut with the top of the baking-powder can.

A cake a trifle more elaborate is made as follows: Stir thoroughly one cup of sugar and a small half-cup of lard and beat into this one cup of unsweetened apple-sauce into which a teaspoonful of soda has been previously beaten. Add one and three-quarters cups of flour, one teaspoonful of salt, one-fourth teaspoonful of cloves, one half teaspoonful of cinnamon, one cup of raisins, and some nutmeg. Bake slowly for forty minutes.

The usefulness of the baker is by no means exhausted with breads and deserts. Many a delicious roast of moose sirloin or short ribs with browned potatoes has come from our reflecting oven. The only precaution to be taken in roasting is the necessity of previous searing of the meat in a frying-pan to keep the juices from escaping. I have never been able to get a sufficiently intense heat to sear the roast in the baker. The addition of a few slices of onions to the roast will mellow the game flavor.

If you desire baked fish and have no artistic scruples against baking fish except when encased in mud and green leaves, try the baker. Draw the fish, but do not remove the skin or scales. Lay evaporated or fresh onions inside, sew fat pieces of pork through the skin, salt and pepper, and keep sufficient water in the pan to prevent burning. A five-pound fish requires at least an hour in a baker.

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ALL ABOUT COON HUNTING

By THOMAS FOSTER

A Few Near-Facts and a Lot of Guff About a Mighty Good Sport

THE dictionary defines a coon as "an American nocturnal procyonoid carnivore (genus *Procyon*), related to the bears, having the head broad behind with the muzzle narrow and a moderately long ringed tail."

Dictionaries are curious things. The same one insists that the proper name for this friend of our youth is raccoon. Think of that! Ask some good colored brother what he thinks of such a book. No use talking, dictionaries are becoming decadent.

But the coon—well, he's a whole book in himself. On occasions he has all a 'possum's repose of manner and self-control under trying circumstances, combined with a marvelous singleness of purpose and celerity of movement when necessary. A brother and I once spent two hours of a hot August afternoon trying to boost a coon out of a hollow tree. There was a big hole above him and a smaller one below, where a fire had been built recently.

We poked from below and couldn't reach him; we poked from above and could reach him. But that was all the good it did us. Try as we might we couldn't budge him. The self-control of that coon was certainly a beautiful lesson in repose in this hectic and hysterical age. Then we discovered that he was dead and had been for two or three days. That was why he was so self-controlled. But the coon is a remarkable animal for all that. The mere fact that my illustration doesn't prove my point doesn't disturb me.

The coon is a mighty difficult animal to observe. Though his haunts lie far from Broadway, his habits are mostly nocturnal. The dictionary's right on that point. Only the wild young coons that have not learned what a sad, serious thing life is are ever found far from the parental rooftree after daylight. But every country boy knows the tracks of his unseen little neighbor—those queer little prints like baby's hands in the mud along the creek banks. Crawfishes are about the most delectable dainties that come to the coon table. I've heard of their catching fish, too, after the fashion of their big cousin the bear, but I've always had my doubts. Perhaps it was because I'd tried fishing in those same streams and wasn't willing to credit Mr. Coon with more intelligence than I suspected myself of possessing.

Another thing that the coon has a weakness for is roasting ears—soft, sweet, succulent. Oh, he's a gourmand, he is, give him a chance; although I could never forgive him his fondness for birds' eggs and tender nestlings.

But the real occupation and chief amusement of the coon is in being hunted. To be sure, it is an extra-hazardous occupation, something like playing five-cent-a-point auction with three dollars in your pocket. And as an amusement it is not to be recommended for elderly coons with weak hearts and a marked predilection for easy chairs and a comfortable ear of corn in the late afternoon of the night.

It's the young coons who go in most for being hunted. I've never had a direct statement of their point of view, but I am sure that in their opinion it is a good game with a sufficiently even break to compensate for the risk. When I have been along the odds were all on the coon, but the polecats suffered horribly. I never went coon-hunting in my life that I wasn't an object of general public suspicion—or worse—on my return and

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the dogs weren't even allowed in the barn. But as for coons——

It was good fun, though. I can remember those nights still. It would be in the fall of the year. That's why I'm thinking about it now. The nights are beginning to grow chill and there's frost in the air at times. Not too much, for the dogs won't run a trail well on a frosty night. The best nights were in late September and October, with an overcast sky and a threat of rain. That's the kind that bring Mr. Coon out to prowl along the banks for crawfish or to ravage the farmer's cornfield.

The equipment is the simplest in the world, warm clothes, heavy shoes, possibly a pair of climbing irons, and an axe. Some people take a shotgun, but I never could see quite the sporting quality in that. Being a good sportsman, I always like to give the game as much chance as possible—consistent with making sure of getting it. Besides, I was always such a rotten shot that I couldn't have hit a coon in a gooseberry bush at any range longer than ten feet.

Why Dogs Are Necessary

Oh, yes, I nearly forgot the dogs. That would have been fatal. Dogs can do a lot of things that a man can't. Following a trail by scent is one of them. The average man wouldn't make much of a hit with his nose to the ground, barking furiously, on a two-day old coon track. So we'll just take the dogs along to make sure—foxhounds for choice, that have been taught to leave rabbits alone, and, if possible, dogs to whom a polecat is anathema. Of course, there aren't any such dogs, at least I never saw any. *Mephitis mephitica* is bad medicine for the average canine, makes him desperately ill and unhappy. After such an encounter the dog will sneak back to you with a feebly apologetic tail and the general air of a man who has just got well acquainted with himself and is not at all pleased with the prospect. But he'll go and do the very same thing the next night, with the very same results. Dogs are quite human sometimes.

Having selected the night—if you're a married man you'll have trouble here—you get your dogs together, after waiting half an hour for the one man who is always late, light the lantern, and start. I forgot to mention the lantern before, but it's very necessary. Its principal function is to dazzle the eyes of everybody except the man who is carrying it, and to doubly deepen the darkness outside its effective radius of fifteen feet. However, the oil usually gives out about midnight, so the lantern is not a serious obstacle, after all.

Away you go for the creek bottoms, where the big trees—and the hard climbing—are. If it's a clear night there are ten million points of light twinkling down at you and the sky is velvety black. The lantern throws long, striding shadows that merge into the wall of blackness that shuts you in. The soft scent of ripening corn comes to you on the damp breeze and there are faint, mysterious rustlings that tell of the small, busy world about you.

But these are only the prelude of the real work of the night. The dogs are off, ranging through the cornfields, scouting along the small streams, alive with the possibilities of the night and their own share in it.

The first warning comes in the deep, bell-like note of old Drum, hardened veteran of many a night's run, shrewd enough to scorn the enticements of rabbit tracks or the awful allurement of M. Mephitica. Then Spot chimes in, always a close second, and one by one the whole pack joins the chorus that swells through the night stillness. It's a coon, sure enough, and a fresh one, although the easy agreement of the younger dogs proves nothing. They would fall in behind old Drum on the trail of an ichthyosaurus if he assured them that that was what the boss wanted. But Drum makes no mistakes. He has no fondness for apologies and life is far too serious a matter to waste over long chances.

If the trail is a fresh one the run is short. A short-legged coon has little chance against a long-leaping foxhound when the going is good. Soon the baying changes from the short bark of the trail to the deep, long-drawn note that means "Treed." Or maybe it's the other

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way round. I've forgotten which, but it doesn't matter. You'll know the difference when you hear it, and that's all that's necessary. Here's where the axe or the climbers come in. In my country there's a prejudice now against chopping down trees unnecessarily, so on go the climbers and up goes the one inevitable youngster to be found in every coon-hunting party who can climb anything that ever grew. The dogs cluster around the foot of the tree, barking incessantly and making vain attempts to climb after the figure that is slowly making its way toward the top. All but old Drum. He knows the game better than that, and now he is circling quietly around in the shadows outside the outer limits of the branches. The time for barking is past and it's coon he wants now.

Comes a cry from the climber: "There he is! I see him!" A branch is shaken violently and what had been a bunch of dead leaves comes to life and slides cautiously farther out on the swaying, bending limb. Another shake under a stamping foot near the butt of the branch, and the coon slips, grasps vainly at his swaying foothold, and down he comes, with a loud yell from the climber and another from men and dogs below. Down through the branches he falls, grasping and slipping, checking his fall, till, with a sudden thump, he lands among the hysterical, leaping dogs.

Even now the coon has not despaired. Perhaps his fall is not a fall at all, but a long, sprawling leap that carries him well away from the circle of dogs under the tree. This is what old Drum has been waiting for, and he meets Mr. Coon as he lands, his feet well under him, ready for the dash into the underbrush that may save him yet. Not if Drum knows it. Quick as he lands the old dog is on him and pins him down. There is one squeal from the coon of mingled pain and rage and the hunt is over so far as that particular coon is concerned.

It should be said that this part of it is largely a fancy sketch, so far as the writer's personal experience goes. His own coon-hunting was never as easy as that—by about four hours and a half.

But, like lots of other things, the pleasure of coon-hunting is not always in direct ratio to the number of coons caught. There are nights not soon to be forgotten when none was captured at all. Yet it was worth while to be out in the damp October night with the smell of dead leaves in the air and the brilliant stars gave promise of sharp, biting nights to come. If you can't catch coons, you can always build a fire, and if you are careful you can find a few roasting ears. Then, as you sit around the fire trying to keep awake, and envying the older men who have a pipe to help hold their eyes open, a figure strides into the circle of firelight and a cheerful voice inquires, "Any coons?" It may be the owner of the corn you are roasting. What matter? He grins and eats some of it with relish. The baying of the dogs has called and the magic of the night softens your petty larceny to his eyes.

And that's about all there is to coon-hunting—that and a thousand other things that you will remember still on quiet fall nights when the baying of a dog comes to you through the darkness. Then all of the genial barbarian that is left unconquered in your soul arises and goes forth to wander the woods and fields of youth. It isn't so much, after all, just to catch a coon, but to keep alive the spirit that made coon-hunting such an unalloyed joy, through good and bad luck alike, despite weariness and random thoughts of a soft, warm bed at home—this is the real test of fitness. This is to have discovered the secret of perpetual youth and the surest medicine for the daylight ills of life.

"The Man in the Tonneau" is a story of how motoring looks to the Man who sits behind and does nothing but ride. January OUTING.

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HITTING THE CLAY BIRDS

By EDWARD C. CROSSMAN

Practical Points for the Man Who Wants to Improve His Performance at the Traps

A SHOTGUN pattern has the charity of a cannibal. After a time the neophyte finds this out. At the start he feels that the shotgun, being a shotgun and shooting a multitude of pellets, ought to cover about all the space in front of him. After a few seances at the traps he flops to the other extreme and believes firmly that the gun shoots every blame pellet in the load into a teacup-sized space at fifty yards.

The earlier in the game the beginner rids himself of the scatter idea of the shotgun, the earlier will he realize the necessity for absolute accuracy in the pointing of the smooth tubes. Later, when he has found himself, and knows mighty well whether or not he is pointing right, he finds the gun occasionally taking care of him—breaking the birds when his hair arose in fright in the short time between the trigger pulling and the smashing of the blue rock. He knows that he is not quite right, but being near it the gun took care of him.

Only in such cases is the spread of a trap load of any use. In the case of the beginner, he might well imagine that the gun is loaded with one single round ball, and that he must place this on the clay to break it. Also his first few trials won't greatly disabuse his mind of the single-pellet idea. I have watched a man—many men, to be accurate—fire twenty straight shots at blue rocks flushing from a trap sixteen yards away, and never touch a clay. To me it is a mystery, but shotgun shooting, up to my present stage of punkness, has been quite easy, due perhaps to a far larger rifle-shooting experience than can be the part of the average man.

Apparently the man firing thus consistently, and not nervous, must be just squibbing off the gun in the general direction of the flying clay. This method would not break flying washtubs in clay, let alone a tiny saucer.

The golden rule in shotgun shooting at flying objects is—point the gun where the bird ain't. To this might be added also—but where you think he is going to be.

The first step in the process is to learn to point the gun. The hands do much of the guiding, and one can do fair shooting by the feeling that the hands are aligned on the mark, but no man ever broke ninety per cent of the clay birds by any such pointing process. The rear sight is the cheek. If the gun fits correctly, and is cheeked the same each time, the eye looks straight down the rib, and the tubes point at what the muzzles touch. You'll find no successful trap shots at the beginner's trick of keeping the head upright with a slight section of the jaw toying with the comb of the gun.

You find no trap shot throwing up his gun with the careless and studied ease of the "field shot," which means hitting one place on the shoulder and face one shot, and another spot the next. This graceful style is equivalent to shifting the rear sight on a rifle for each shot. It may slobber down Bob White if the gun is sufficiently open, and no uncharitable person keeps count of empty shells and perforated birds, but it won't break ninety per cent of clay birds. The difference reminds one of those people who are wonderful game shots, but cannot shoot on a paper target. The whole secret lies in the fact that nobody keeps count of the raw misses they actually score in the field.

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The most successful and consistent field shots I have ever seen were people who used practically trap gun dimensions on their field guns, and who got their faces down to the same position on their gun stocks for each shot. There is a pleasant bit of fiction to the effect that the trap shot is usually not a game shot. There is only one thing to equal the age of this bit of fiction—its falsity. The trap man may fall behind the man used to judging distances, but let him land on the birds a few times—and the fiction fades. I am minded of the good old American trap shot who tackled an English shot at the clays thrown from a sixty-foot tower above their heads.

The American got no "sighting shots," to show what he had to expect, and missed his first two. Then he broke all the rest they threw, and beat his English friend at his own game.

Probably the most important thing at the traps is to keep the same elevation, which means the same position on the stock, seeing the same amount of rib each time. When this is mastered, then straightaways are smothered consistently. It is a pious idea, therefore, to start in by shooting birds thrown straight from the firer, and to keep at it until the birds are smothered every time. Rest assured, the man unable to blot out the birds going straightaway connects with those hissing out at right and left angles, only by accident.

All changes must be made from the hips alone. The gun must be glued to the cheek in as nearly the same position each shot, then if the gun is swung after a right or left quartering bird, the body has to do the work—pivoted from the hips. Always must the cheek remain against the stock, and the eye glancing along the rib.

The neophyte's way is to push the gun frantically over after the bird, with the arms alone. If the bird is a right quarterer he pushes the gun over after it in jerky fashion, driving the stock away from his cheek. If it is the other way he hauls the gun over the left, raising his head, and squibs off the gun there or thereabouts. His rear sight immediately ceases to be.

If the bird is a straightaway, which means that so far as elevation goes it flares skyward from a three-foot elevation to a ten-foot one, he usually raises his head in horrified fashion and jerks the gun muzzle up toward the stars. Not infrequently he gets a bird but it proves nothing.

After he finds himself he does as do the other successful trap shots, he keeps that cheek against the stock, and never alters the relation of face, gun, and arms until the shot goes. Also he can tell you to an inch—he feels so at least—where his muzzles were when he pulled trigger, whether just under the straightaway or blotting him out, or eight inches ahead of the mild quarterer. Not so the beginner; he doesn't know within four feet.

Head and Stock Must Fit

It is important, this first absolute, unvarying uniformity of adjustment of head to gunstock. Every shot a miss need not be discouraging; it is not so much so as every fifth shot a hit. The misses indicate, at least, uniform holding if a competent coach is directing the performance, and the beginner is actually making an effort to sight on the birds instead of in their general compass direction.

I admit feeling sorry for the beginner with the 3¼-inch drop at the heel of the gun, and nice sharp comb. He has simply got to use a different stock to do at all consistent work at the traps, but some of them learn only in about six months—then get the 2 to 2½-inch drop, round comb, and long stock prescribed for those desiring to follow the trap game.

The next two important things are concentration and trigger pull.

All thought of spectators must be barred. All method of letting off that gun save by an even, smooth squeeze must be abandoned.

Each shot must be called—the beginner must tell the man coaching him, or tell himself, nearly as good if he is alone—just where his muzzles were in relation to the bird when he pulled. Until he does this he is making slow progress. The crack trap man is not getting his birds merely by pointing out in the gen-

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eral neighborhood of the saucer and letting go. He can call each shot nearly as accurately as can the rifleman on the 200-yard target; he knows precisely where his muzzles stood with relation to the black saucer when the gun went off.

Every shark gets occasional misses, but rarely does said shark get a miss and not know why. Sometimes in a squad you'll hear him mutter, merely to relieve his feelings not to break the unwritten rule that those in a shooting squad shall not talk, "Behind that fellow," or "Led him a foot too far, drat it."

Time and uniformity of distance at which the birds are fired at are important in trap shooting, but the beginner will do well to remember that there is not a lick of sense in pulling until he knows that the gun is on the bird or the proper distance ahead to break it. Let him find himself, learn how to point the gun, then he can cultivate evenness of shooting, the much-desired "time."

Even, smooth, unflurried, swinging after the birds, and even, unjerking let-off of trigger are the first lesson of the learner. It is his part to get up the gun, get it fixed in the right position, get "set," with his weight well forward on the left foot, and then get the muzzle pointed just below the edge of the traphouse, before he says "Pull!"

He is ready, he can go after the bird as soon as it appears.

The usual way is to throw up the gun any old way, stutter "Pull!" before he has fairly glanced along the barrels, then describe five wild and meaningless circles trying to find the bird below the obstructing gun when it shoots forth. Many trap men fix their gun smoothly in place, give the muzzles a little bob downward and call for the bird as they return to place at the edge of the trap-house. I know one shot who religiously describes a little circle to the left with his muzzles as a preliminary to saying pull, apparently to make sure that he has not slipped a joint or fallen a victim to paralysis during the interim of the last bird.

It is a good plan always to point the gun at the edge of the trap-house, to avoid interference with a view of the bird from the very first. Then from the very first dash of the black and yellow saucer the muzzle should hop on to him and accompany him to the finish.

To be sure, they must leave him and go ahead a bit if he is quartering bound, but that is not more than a foot or two at the most.

Elevation must be kept uniform whether the bird is a quartering bird or one bound on the straightest line for the horizon. If you find that you must blot out a bird to break it, then keep the gun well up in leading quarterers; don't expect to break them with a perfect lead, but with the gun ten inches below them. Don't ever expect anything of the spread of the gun; it will fail you just as often as you trust to it.

Keep the Gun Swinging

Never should the gun be stopped. If the bird is a quarterer the gun must pick it up, race with it, lead it from a foot to three of them, depending upon how fast a swinger you are, then keep moving all the time you pull the trigger. The surest way to avoid the "stop-gun" habit is to exaggerate the swing business for the first month or so, swing through long after the bird is broken. Looks a bit funny, but nothing looks quite so funny as a calm black saucer sailing on to an ultimate acquaintance with the straw out at the fifty-five-yard point. Just as sure as you stop your gun as you pull trigger, just that sure are you not gaining in skill, and cultivating, worse and more of it, a mighty fatal habit so far as shotgun shooting is concerned.

A feeling of entire self-possession and of confidence is worth birds to the new hand. Make up your mind that you're going to swing that gun smoothly and quickly after each bird, and blow said bird to black shreds. It is being done by thousands of ordinary mortals without any college education in the game—and you can do it just as surely.

From the very first pop of the saucer from the trap the mind must be at work, estimating its distance, its speed and its direction. The first two are forgotten by the experienced man; he knows they are uniform. The brain should be expected to send down the verdict before

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the bird gets out fifteen yards, then it is up to the eye and the body to swing the gun to its proper place in the procession when the trigger is pulled. Absolute concentration is essential. The mind must be only on that black disk, how it is speeding, its direction, and where the gun must be to stop it. The man pulling off long strings of broken birds is the man who is deaf, dumb, and possessed of no memory save for the lessons of former shoots. If you told him that his house was burning down as he called pull, he would not hear you—or if he did he would surely miss his bird from the break in his mental concentration, not from the nature of the news.

Proper equipment goes far to making the first lessons pleasant ones. The trousers pockets are not the place for the shells, particularly the left-hand pocket. They are to be put in a regular trap-shooter's shell bag, either loosely or with the end of the box cut neatly off to expose the layers of shells. In front of the right hip is a handy place for the sack.

The street coat is not the garment in which to shoot; its fit under the arms and its padding are great aids to discomfort and irregular holding of the gun. Save for cold shoots, a jersey to button up like a coat, and soft leather padding for the shooting shoulder is the best thing. Suspenders add nothing to good fit of the gun at the shoulder or to ease of swinging.

For the double gun, a glove is necessary lest the left hand get warmed up and take the mind from the hitting of the birds. A pair of greenish-yellow shooting-glasses are worth their weight in silver—and more—to protect the eyes against stray powder grains and to aid in defining the bird. They should be large and toric to let the line of sight intersect the glass at right angles, not "slaunchwise."

One of the most pleasing experiences is to shoot in a hard derby or other form of hat that jars over the eyes with each shot, or blows off from the invariable trap-shoot zephyr. The effect produced by the hat over the eyes at each shot is particularly coy, and an aid to marksmanship. Therefore, either a hat of the crusher variety, soft and devoid of travel instincts, or else a cap, never the street derby. The whole outfit, glove, glasses, shell bag, shells, jersey, and cap can well be installed in a small leather sample-case like a suit-case in miniature. The leather shell case is a nuisance in that it has not enough room for the outfit, and you never put your shells in the thing if you own it.

REAL CAMP GRAVY

GOOD gravy, something with a taste and a tang to it, something thick enough to smear on the bannocks and slick enough to ease them down is among the proudest products of the good camp cook. Mr. Kephart, in his culinary classic, suggests somewhat the following: To the bacon grease left in the pan add enough white flour (about a tablespoonful) and rub it in smooth. Pepper and pour in sufficient boiling water (say a couple of cups) and let it boil some. He suggests that a tablespoonful of catchup will help. It will. A further amendment is to work in a teaspoonful of peanut butter—the same not being out of place in a grub bag already containing catchup. The result is something delectable, yet different in the way of smear for camp breadstuffs. Furthermore, it is a satisfying top-dressing for baked macaroni. In this Italianate contingency it is not inappropriate to further fortify the gravy with onion salt—a virile half-brother to the well-known celery salt. On the side let it be noted that vermicelli cooks quicker, absorbs flavors more thoroughly, and generally has it over macaroni like a tent.

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THE TRUTH ABOUT FOX FARMING

By CLARENCE BIRDSEYE

ILLUSTRATED WITH PHOTOGRAPHS AND DIAGRAM

FOR several years the air has been full of rumors of the enormous profits to be made from the breeding of black and silver foxes. The editors of this magazine have been watching the experiments closely and have seen prices soaring skyward year by year. They have believed, however, that the industry was being greatly inflated with the result of obscuring the real possibilities of the new business. So we have waited—despite numerous opportunities to publish good articles on this subject—until we could be sure that we had found the proper conjunction of man, conditions, and knowledge. That time has now arrived and the article which follows is the result.

DURING the past two years numerous articles on the new industry of fox farming have appeared, but from their luridly optimistic and sensational nature it has been all too apparent that the majority of them were the product of the professional promoter, while others went to the other extreme and denied the industry any real merits at all. A sane and conservative discussion of the subject would therefore appear timely.

For several years I have been deeply interested in this question of raising game and fur-bearing animals in captivity. Last summer I examined a number of the most successful fox farms on Prince Edward Island, and, at the invitation of Dr. Grenfell, spent all of last winter studying the possibilities of developing this industry on the Labrador coast. For the past few months I have been studying the business from the fur manufacturer's point of view and have consulted a number of the leading New York fur dealers on the subject. The facts given in the following article are, therefore, authoritative.

I have given, first, a brief description of the silver fox and the methods of handling it, and then an outline of the past, present, and probable future status of the fox industry. Instead of trying to show that anyone can make a fortune overnight at this business I have pointed out that the present condition is a very much inflated one in which there must shortly come a radical change. In fact, the following article gives a safe, conservative statement of the real facts about fox farming, including some idea as to equipment, capital, methods, necessary conditions of plant and location, etc.,—what the industry amounts to, in short, when divested of its bonanza aspect and reduced to a common-sense basis.

The term "silver fox" as used by furriers includes the darkest phases of the common red fox. The color of this species varies from rufous red to pure black, and between these two extremes there are several intergrading color phases, respectively known as red, patch (or cross), silver, and black. In the red phase the animal is entirely rich fulvous, except for restricted black markings on the feet and ears and certain white-tipped hairs on the back and rump.

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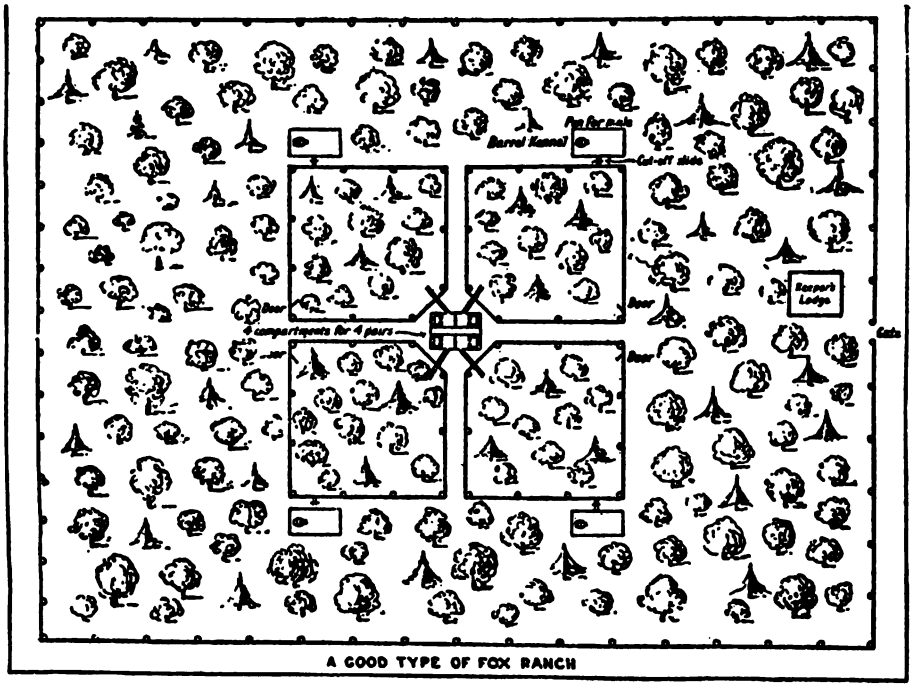

A TYPICAL FOX FARM IS MADE UP OF AN INNER GROUP OF SMALL BREEDING-PENS SURROUNDED BY AN OUTER FENCE

From this phase to the next the black increases in extent until in the typical patch fox the black predominates on the feet, legs, and under-parts, while fulvous overlaying black covers most of the head, shoulders, and back. A gradual increase of the black and a replacement of the fulvous by white brings us to the next phase, the silver, in which no fulvous occurs—the entire fur being dark at the base and more or less heavily overlaid with silvery white. Finally, in the black phase, silver is absent from all parts except the tip of the tail, which is white in all phases.

The red form is common in most timbered countries, prime skins from Labrador and the Northwest averaging from $8 to $10 each. The patch (or cross) phase is not rare in the colder parts of the animal's range, prime Labrador skins bringing from $15 to $150 apiece. The "silvers" are scarce, only about 1,500 or 2,000 being trapped annually and the pelts bringing from $150 to $1,000 each. The best silver and pure black foxes are exceedingly rare, only a few score being trapped each year and selling readily at from $1,000 to $2,000 each. The finest skins in the world are those from foxes bred on fox farms, and the record price of $2,843.10 was paid in the open wholesale market for the pelt of a single ranch-bred black fox.

Although the cheapest red foxes and the most valuable "blacks" are of exactly the same species and interbreed freely, still it is possible by the ordinary laws of selective breeding — applicable alike to sheep, cattle, dogs, or foxes—to secure strains of the animals which are not only of the finest quality pure black and considerably larger than their wild ancestors, but which *invariably breed true to color*. Moreover, by starting with inferior grade stock the best strains can be established in a few generations.

Although foxes have been kept alive in zoölogical parks since early historic times, it was not until about twenty-five years ago that determined efforts were made to breed the animals in captivity. Since high-grade foxes are no more difficult to handle than are cheap "reds," it was but natural that the early breeders should turn their attention to silvers and

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blacks, though through lack of funds and ignorance of the disposition and needs of their animals most of these early experiments were doomed to failure. A few of the more intelligent "fox farmers," however, persisted in spite of early reverses, with the result that there are to-day a number of men who have established strains of true breeding pure black or dark silver foxes, which breed freely in captivity and have made their owners wealthy.

Until a short time ago these successful breeders jealously guarded their secrets and marketed the pelts of their animals at the London fur sales. Recently, however, they have divulged their methods and sold their surplus stock alive for breeding purposes. These live foxes bring several times what their pelts alone are worth. Blacks of the best strains now cost from $16,000 to $45,000 a pair and inferior grades of "patches" and "silvers" sell readily at from $1,000 to $6,000 a pair. Even at these prices the demand exceeds the supply and the most remote fox-grounds are being hunted for wild breeding-stock.

Why Such High Prices?

In considering the high prices paid for breeding foxes it must be remembered that each pair may be expected to raise an average of three or four pups annually for about ten years; that is, each female has a potential productive capacity of from thirty to forty pups, which, if sold for anything like the price paid for the original pair, would yield an enormous profit on the investment. It is because of this large productive value that choice breeding animals are so costly.

The finest wild foxes come from Labrador and the Northwest, but the animals can be bred successfully in any sufficiently cold region, such as the Northern States, Canada, Norway, Russia, and Siberia. There are, however, certain climatic conditions other than low temperature which seem to be essential to the production of fur of the greatest beauty. Poland says that large areas of open water, such as lakes and seas, render the fur thicker, probably owing to the high percentage of humidity in the atmosphere. Exposed sea-coasts and open prairies, on the other hand, render it coarse or pale. Dense woods tend to produce silky fur with a high sheen; the unusually heavy, yet bright and silky, coats of the Labrador foxes are probably due to the combination of great cold, high humidity, and abundant forest shelter to be found throughout that country.

A fox farm should surely be located in a grove of woods, for the forest cover is essential to shelter the foxes from curious people, dogs, and other animals, and to give them a sense of security. It is also desirable as a protection from the direct rays of the sun, which would overheat the foxes in summer and tend to fade their fur in the winter.

Care must be taken to select an area which will not be flooded and which is at least fairly well drained. Clay offers no drainage at all and light, sandy soils entail an additional expense for fencing, as the foxes may often burrow in it to a depth of six to eight feet. The best soil is a loam or turf over a hardpan a foot or two below the surface. It is desirable to select an area free from deep snow-drifts, for otherwise an excessively high fence would be required to keep the foxes from escaping in winter.

As foxes are exceedingly nervous and easily frightened by strange sights, sounds, and smells, it is important that the pens be in a secluded spot. But, on the other hand, the animals are so exceedingly valuable that the pens must either be comparatively near the owner's house or a watchman must sleep close at hand. A small island makes a good site for a fox farm, as the animals can be more easily captured if they get loose outside the enclosure.

Strange as it may seem, foxes, mink, marten, and other wild fur-bearers can be best raised in comparatively small enclosures, and an area of five acres is ample for operations on a large scale. Hitherto attempts to breed red or silver foxes in large fenced areas have failed, and the most successful "fox farmers" keep their animals in pens only thirty by forty feet. Mink and marten are best confined to pens very much smaller. It should be noted, however, that at least one experienced breeder is now experi-

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menting with the "colony method" of fox farming and anticipates a certain amount of success.

A typical fox farm is made up of an inner group of small breeding-pens surrounded by an outer fence. Each breeding-pen is usually made to cover between 900 and 1,500 square feet, thirty by forty feet being a favorite size. The fences are made about 8 to 13 feet high, depending upon the amount of snowfall. They are constructed of 14 to 16-gauge poultry netting with a two-inch mesh, galvanized after weaving. The fence should have an eighteen-inch or two-foot right-angle turn-in at the top, to prevent the foxes from climbing over, and a strip of carpet wire three feet wide turned in on the surface of the ground to keep the animals from digging in the angle of the fence. The main wire wall is sunk below the surface and turned in again, to intercept any foxes which may start to burrow inside the line of the carpet wire. Some breeders remove the male fox from the breeding-pen after the female has become pregnant and keep him in a small enclosure near by.

The outside fence surrounds the group of breeding-pens at a distance of from twenty to one hundred feet, according to the density of the forest cover. This fence is constructed like that of the breeding-pens, except that it need not be sunk below the surface.

Each breeding-pen is occupied by one pair of foxes, and must be provided with a suitably warm, dark, well-ventilated sanitary kennel. Some fox breeders place one separate kennel in each pen, while others arrange their pens in groups of four and provide a four-compartment kennel-house communicating with the pens by means of wooden chutes resembling the entrance to burrows. The author prefers the latter plan.

A PRINCE EDWARD ISLAND FARM WHICH SHOWS GOOD FOREST COVER FOR THE PENS

Wild foxes eat a great variety of food, including mice, birds, insects and berries. Meat, therefore, is only a part of their natural diet. Even where all food must be purchased, it amounts to less than five cents per fox daily, and where wild meat and fresh fish are readily obtainable the year round the cost of fox food becomes negligible.

Foxes usually have from two to four young at the age of twelve months and thereafter for eight or ten years average four or five each spring. When born the young are small and weak, but grow rapidly. They may safely be separated from their mother when five or six

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months old, and they have prime fur at eight or nine months.

The mere keeping of foxes in confinement is simple, but these animals are extremely nervous and when in the presence of strangers are constantly excited. This is especially true during the breeding season, when the mere presence of a stranger may cause an anxious female to refuse to mate, or even to destroy her healthy young. For this reason it is essential that the breeding-pens be situated in a quiet locality and that no one but the regular keeper be allowed access to them except for a few months during the fall. When properly handled foxes breed regularly, and are good parents, but great care must be exercised in dealing with them, especially during the breeding season.

Fatal disease is so rare among foxes that it need not be taken into account. Various accidents due to overcrowding, poor quarters, or overfeeding sometimes occur; unwise inbreeding often causes rickets, and worms are a frequent source of slight trouble, but in a well-managed farm disease need not be considered.

Foxes are exceedingly hardy, and I have known one to speedily regain its health after having been held for ten cold, stormy days in a heavy steel wolf trap. One of my best foxes was kept by a pen-keeper for five months in an enclosure only 4 by 6 feet, and was then carried in a little 18 by 24-inch packing-box for a hundred and fifty miles on a dog sledge.

The industry of fox farming is no longer an experimental one, and is firmly established upon a commercial footing. This is proved by the fact that according to a United States Consular Report published in July, 1913, the incorporated fox farms in Prince Edward Island alone are capitalized at $6,150,000. Both the American and Canadian governments have recently published information on the subject, and the Russian and other European governments are said to be now investigating the matter fully. Nevertheless the industry is a new one and its past, present, and future status can best be understood by comparing it with that of rubber growing, to which it is closely analogous.

Thus for many years the entire supply of crude rubber was obtained from the natural forests by natives. Next came the numerous efforts of pioneers to cultivate rubber trees, the more persistent and intelligent experimenters finally succeeding and reaping fortunes. This stage of development was followed by the period of exploitation, during which innumerable over-capitalized companies were formed and floated until, as many people remember, this unhealthy boom collapsed, plunging the great industry of rubber cultivation into temporary disrepute—from which it has now emerged and become recognized as a safe, scientifically conducted business paying satisfactory dividends.

So with fox-farming, which, although the present boom condition due to abnormally high prices must sooner or later collapse, is gradually taking its rightful position as a profitable, necessary, and scientifically conducted industry. A decade ago the only available fox skins were those secured from wild animals by trappers and hunters. These skins were of all colors and qualities, only a score or two of prime black specimens being taken each year. Then followed widely scattered attempts to breed foxes in captivity, a few of the more intelligent and persistent pioneers ultimately succeeding and establishing strains of true-breeding pure black foxes of the highest quality.

After the Boom—Health

This period of successful effort on a small scale has been followed by the inevitable exploitation and the industry is now in a state of boom which is certain to end in a slump within a short time. But, like the great industry of rubber cultivation, that of fox-farming is intrinsically practical and necessary and is certain to emerge from the discredited position of a collapsed boom into that of an admittedly permanent, safe, scientifically conducted business, paying satisfactory returns upon the capital invested.

The following extracts from the Canadian Conservation Commission's recent report graphically portray the phenomenal growth of the industry:

"The fox-breeding methods of the pio-

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THE BREEDING-PENS SHOULD BE SITUATED IN A QUIET LOCALITY AND NO ONE BUT THE REGULAR KEEPER SHOULD BE ALLOWED ACCESS TO THEM

neer breeders were kept from the public, and as late as 1910 not more than a dozen ranches were in existence. The last big sales of fur were made in that year, and selling for foundation breeding stock has been general since that time.

"In 1911 and 1912 all available foxes were sold for breeders. The first general sales were made in 1910, at prices not far above the fur value, viz., about $3,000 to $4,000 a pair. In 1911 the price rose to $5,000 a pair, and about littering time in 1912 one pair sold for $20,000. This, however, was for a pair of excellent proved breeders, which a few weeks later produced five whelps which were sold for $20,000 in August, 1912. By September 1st, when deliveries began, the price was $8,000 a pair for pups, and a month later $11,000. By December, 1912, $12,000 and $13,000 was the ruling price. Old proved breeders of good quality were valued during the last months of 1912 at from $18,000 to $35,000."

In answer to inquiries the following telegram was recently received from Mr. Wesley P. Frost, American Consul at Charlottetown, who has made a careful study of the industry:

> Fox pups, 1913, cost fifteen thousand. Proved breeders hardly obtainable at any price; possibly forty or forty-five thousand. Breeders that failed this year, sixteen thousand. Consensus of opinion here that prices will hold or even advance this fall, and will not slip greatly for a year. Scarcity of good stock. Probably not over eight hundred good foxes.

But the blue-ribbon, pure-black, ranch-bred foxes are not the only ones whose price has risen so enormously. Wild stock of all grades is being priced altogether out of proportion to its intrinsic productive value. Fox farms are springing up like mushrooms in Newfoundland, Nova Scotia, Quebec, Ontario, and other cold regions, and every sort of scrub fox is being pressed into service to stock them. Numerous large companies, floated by speculators, are selling their shares to people with inflamed imaginations and a large proportion of the men engaging in the business are in no way qualified to do so.

It is thus evident that most fox-trading at the present time is highly speculative and that a slump in the price of breeding stock must soon come; the "fox bubble" will burst just as the "rubber boom" did, with partial or total loss to many a hasty investor. But history will repeat itself and the few properly financed and managed companies will emerge unscathed

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and place the industry in its proper light as a permanent and profitable business.

The choicest pure black proved breeders now bring as much as $45,000 and the finest black skins sell in the open London auction sales for $2,500 or more. The conservative investor, however, wants to know what the market for foxes several years hence will be, when the present boom shall have subsided and the supply shall more nearly equal the demand. Undoubtedly there will soon be a big decline, first in the value of breeding stock and then in that of choice furs, but to form an idea of ultimate prices it is only necessary to consider the present price of red fox fur and the normal tendency of the general fur market to advance each year.

At present about 200,000 wild red fox skins are secured each year, and the market value of choice Labrador skins is about $12.00. At the present average increase in the value of all skins, red foxes will be worth not less than $30.00 each ten years from now. All questions of scarcity aside, the fur of the black fox is intrinsically far more valuable than that of the red. It is obvious, therefore, that even were the annual production of silvers and blacks to equal the present enormous catch of reds, the price per skin would be at least three times as great for the former—not less than $75 to $100 per skin. The most experienced breeders claim that they can raise red foxes at a profit even at the present prices, and it is therefore evident that choice silver skins will never sell so cheaply as to prohibit a handsome profit to the scientific breeder.

The firm of Alfred Fraser, the American branch of C. M. Lampson & Co., say that although a largely increased supply of good skins would lower the present abnormally high prices of the choicest black stock, it would strengthen and steady the market at a price which would still be high—not less than $500. Prices might go considerably below this figure and still leave a substantial margin of profit under normal conditions.

The cost of starting a well-stocked fox farm at the present abnormal prices of breeders is, of course, enormous. With ranch-bred, pure-black stock selling at $18,000 to $40,000 a pair, cross-foxes at $500 to $2,500 a pair and even red foxes at $50 apiece, the cost of establishing such a farm is prohibitive to the small operator who might desire to buy in at the height of the boom. Aside from the foxes, the highest single expense would probably be for fencing materials. Wooded land in a secluded locality can be had usually at a very low figure and a tract with a suitable dwelling can be acquired without great difficulty. Exclusive of stock the cost of establishing a well-equipped farm containing sixteen breeding-pens may be figured as follows:

Four acres of tillable land, with six acres of wood-lot and serviceable dwelling	$2,500.00
Wire fencing, posts, materials, etc.	1,500.00
Labor, domestic animals, miscellaneous	1,500.00
Total	$5,500.00

The substance of this discussion may be summarized as follows:

1. Fox farming is a well-established and perfectly practicable industry. Red, cross, black and silver foxes are of the same species and interbreed, making it possible to establish by selective breeding a true-breeding strain of the finest color and quality. Foxes are hardy and little subject to fatal diseases. Natural fitness of disposition, care, and experience are essential qualities of a successful fox-breeder.

2. The industry is at present in a state of inflated boom, the inevitable consequence of the rapid development of a new and exceedingly profitable business. Prices may be expected to decline in the near future, after which it may be assumed that this industry, like others that have stood the test of fire, will take its place as a permanent, practicable, and profitable business.

3. Authorities agree that the price of fox furs will never fall so low as to prohibit a substantial profit to the scientific breeder.

4. Foxes can be raised in small pens and the cost of preparing the farm to receive them is comparatively slight.

5. The industry of fox-farming has come to stay and to grow steadily in importance.

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BALDWIN IN HIS "RED DEVIL"

BALDWIN, THE "LUCKIEST" AVIATOR

By ARNOLD KRUCKMAN

ILLUSTRATED WITH PHOTOGRAPHS

An Airman Who Has Spent All His Life at the Game With Never a Scratch or Bruise

ON the thirtieth day of the past June a small group of people stood on the banks of beautiful Lake Keuka, near Hammondsport, New York. They were gathered around one of those curious man-made hybrids of the air and the water called the air-boat. A medium-statured, stockily built, rugged-faced man of indeterminate age skipped with amazing agility for his bulk over the shifting, teetering float and took the seat in the boat under the wings. As the machine was pushed into deeper water John McCurdy, the young Canadian who made the first flight from Key West to Havana, turned to Glenn H. Curtiss and asked:

"The Captain has never flown a hydro. Isn't it unsafe to let him go up in it alone?"

Curtiss grinned and took a census of eyes before he answered: "Afraid to let Uncle Tom fly? I'd just as soon think of being afraid to let Mrs. Curtiss wheel our little boy down the street in the perambulator. If there is anything that has wings on it that can carry a man into the air and the Captain can't fly it, I want to see it."

The craft cleft the water and gently rose into the air. In widening circles it soared higher and higher. Air-craft about Hammondsport are as common as automobiles are elsewhere, but the workers in the vineyards that drape the hills on either side of Lake Keuka stopped to watch the flying boat. It came sliding gracefully to the surface of the lake from a height of two thousand feet.

Capt. Washington Irving Chambers, creator of the United States Navy aeroplane auxiliary, had been watching closely. He turned to Mr. Curtiss:

"Now who would think the man who flies like that is celebrating his sixty-first birthday to-day?"

Indeed you wouldn't; for there is nothing about Capt. Thomas S. Baldwin that would lead you to believe he is the oldest active professional aeronaut in the world. Up in Canada recently two old men approached him:

"Beg pardon, sir, but we want to shake hands with you. We saw your father jump out of a balloon near Liverpool twenty-five years ago. They sang songs about him in the halls. We've always thought he was a little bit of the best."

"I'm glad to shake hands," twinkled

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the Captain, "but I guess you are mistaken. My father never jumped out of a balloon anywhere. He died sixty years ago. Perhaps you saw me at Liverpool. I was there twenty-five years ago with my parachute."

It's almost always that way. Very few people identify the contemporary Baldwin of the Red Devil aeroplane and of the first American dirigible balloon with the daring young person who literally fell into celebrity thirty years ago by plunging out of a balloon with his then new invention, the now common parachute. It is singular that most people believe that the original balloon-leaping Baldwin is in the limbo of Blondin, Jumbo, and those other marvels of the golden age of the circus.

A Money-Maker Always

It is a striking illustration of the fact that aeronautical activities have passed from the sphere of the mountebank to the domain of exact science. And yet, without being a scientist and with no purpose but to provide an entertainment that would earn large sums of money, Captain Baldwin has contributed much to develop aeronautical evolution. His parachute is used all over the world today. His many patents on balloon mechanisms are utilized by people who do not even know who invented the clever details they find so handy. Twenty years ago he built and flew the first dirigible balloon America ever saw. In order to accomplish this he needed a light-weight gasoline motor. In his need he found a young bicycle surgeon in Hammondsport, N. Y., and his money, knowledge, and stimulating enthusiasm started Glenn H. Curtiss on the career which has developed him into one of the foremost airmen and aeronautical constructors of the world.

But these first motors necessarily were so frail and limited in their scope that few of them could drive a dirigible balloon with a pilot who weighed two hundred pounds like Captain Baldwin. It did not matter to him who flew the craft so long as they were flown. It was his business to furnish aerial entertainment wherever people wanted to pay for it. So his necessity drove him to spend his talents in choosing and training the men to fly his dirigible balloon. It is thus that it happened that he is the aerial foster-father of such notable airmen as Lincoln Beachy, Roy Knabenshue, Charles K. Hamilton, Bud Mars, Jean Gaudet, and many others. He is proud in the aeronautical profession who can say he is one of the Captain's "boys."

Aeronauts honor Captain Baldwin as one of the most skilful airmen in the world. He has an instinctive knowledge of the air that is almost uncanny. It is akin to the mariner's "know" of the sea. In his mental pouch there is stowed a remarkable miscellany of aeronautical data and experience that can be applied almost to any problem that may confront an aeronaut. He is free with his knowledge and naturally he is popular.

Someone once said that he was rightly dubbed Captain. He exudes geniality and magnetism and always laughs—for publication. But under all these attractive wrappings there is iron and rock-ribbed self-interest. He can manipulate people like a master of political intrigue. When he set out to build the dirigible balloon he sold to the United States Government—the first air-craft sold to the American Government—he gathered about him engineers, aeronautical students, professors of applied mechanics, military experts, boatbuilders, fabric experts, attaches of the United States Bureau of Standards, aeronauts, and others with trained faculties. Their ideas and objects clashed sharply, but his gift of leadership bent their efforts toward the practical end that produced the air-craft for which the Government presented him with $10,000. Like Carnegie, he can attract to himself people whose work brings him practical benefits.

The Captain rarely does anything that does not come to a practical end. To him the word practical is defined as dollars and cents on the right side of the ledger. For this reason he is one of the very few men in "the game" who have made a fortune out of aeronautical activities.

The Wrights were scientists first and business men afterwards. The Captain

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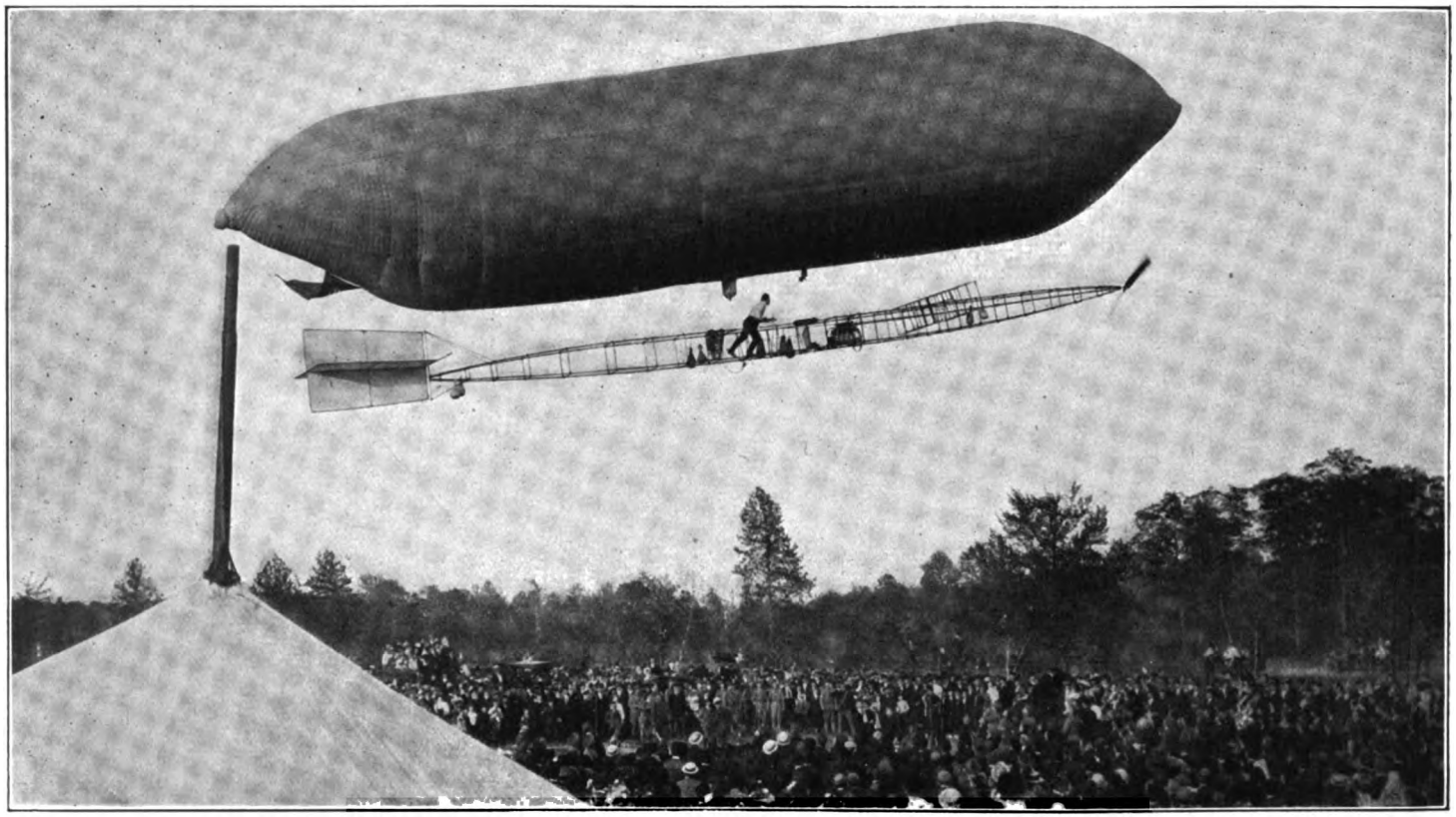

HE WAS THE FIRST MAN TO BUILD AND FLY A DIRIGIBLE IN AMERICA

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is a business man first and a scientist last. He started life as an acrobat in a wagon circus, with the main object of making money, and he has always remained a showman for the purpose of making money. If to the Wrights aeronautics was a great and venerated science, to Captain Baldwin it has been a rich field for the harvest.

In October, 1898, he built a tremendous spherical balloon for the purpose of flying from Denver, Colorado, to the Atlantic Coast, in order to advertise some commodity. It did not reach the Atlantic Coast. In fact, it hovered above Denver for forty-eight hours. But it did reach a height of 28,300 feet! That is almost five and a half miles above the earth. It is the Farthest North of American aeronauts. The void up there consisted of tiny, glittering particles that were neither hail nor snow. It was simply a brittle, frozen atmosphere, intensely cold and exceedingly uncomfortable on account of the blinding reflection of the rays of the sun.

Never Unprepared

There have been air-folk who have reached a height of 35,000 feet in a balloon. But when they did not die en route they invariably suffered painful injuries from the cold and the rarity of the atmosphere. Such unpleasant things have happened at an altitude as low as 20,000 feet. But it did not happen to Captain Baldwin. He was ready. He has flown since he was fifteen years old and he roughly estimates that all his travels in aeroplanes, balloons, and dirigibles would represent a total mileage of almost three-quarters of a million miles. There is probably no living man who has covered so much mileage in the air.

Now, mark this: In a life crowded with tremendous activity, devoted practically to aeronautics in the most hazardous forms, Captain Baldwin has never sustained the slightest injury, not even the faintest scratch!

Of course, there is a reason. He is cautious. He is so cautious that he is exasperating. You wonder how this quality can be so strongly developed in a man who follows a vocation so extraordinarily hazardous as that of an aeronaut. By nature he is cautious to the extent of timidity. The hazard in his business is what makes it profitable. Therefore he accepts the hazard. But there is not a safeguard, not a precaution that can possibly be applied that the Captain does not utilize. You must remember that flying and its hazards and all that go to make up the ensemble are just as much in the humdrum day's work with the Captain and his kind as looking after your office details are in your business.

Every accident that brings a wreck means a loss of money. If the aeronaut goes to the hospital there are doctors' bills and lapsed business engagements. There is no sentiment attached to the business. Accidents are regarded as so absolutely unnecessary that men like the Captain who employ aviators penalize them to the extent, sometimes, of half the cost of an accident. It is this caution that has made a few aeronauts prosperous. It is this perfectly cold, gray fashion of regarding his business, as a manufacturer regards his output of shoes, that has enabled Captain Baldwin to accumulate real wealth.

He started his career as a penniless orphan, a victim of the guerrilla warfare in southern Missouri during the Civil War. To-day he owns tens of thousands of acres in Missouri, controls absolutely an entire suburb of Quincy, Ills., and is one of the heaviest taxpayers in the city of Quincy itself. They are proud of him in Quincy. Oldtimers are full of yarns about Tom Baldwin. Two-thirds of the picture post-cards they sell in Quincy are photographs of the elaborate and imposing edifice that rambles over many acres of ground, which is known as the Baldwin mansion. But the old air-dog has not lived there for eighteen years. He suffered the prosaic life of a landlord for ten years, and could endure it no longer. The tanbark called him and he started out again.

He loves the gypsy life of the showman and the glare of the calcium. But by a strange contradiction of nature he craves home privacy. There are not more than six people in the world who know where he lives in New York when

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BALDWIN IS "LUCKY" BECAUSE HE NEGLECTS NO PRECAUTIONS

he stops long enough to take up an abode. He is content with the typical New York City hall bedroom, and dines at obscure lunch-counters, while his family lives luxuriously.

His wanderlust is almost as strong as his instinct of caution. He has girdled the globe seven times. It was while on one of his early globe-circuits that he had to determine whether his heir should be born in China or on American soil. To abandon his trip meant the loss of a quarter of a million dollars. He did not hesitate. The contracts were cancelled and the heir, who is now twenty-one years old, saw the light of day in Quincy.

This streak of sentimentality crops up curiously in the Captain occasionally. On his key-ring is a battered, strange brass key. It looks out of place among the rest of the keys. He has carried it for forty-seven years. It was his switch-key when at fourteen he was a brakeman on an Illinois railroad. He says it spells utmost happiness to him. It reminds him of care-free days and it stands for the circumstance that opened the door to his career.

While he was amusing himself by performing acrobatic feats on the top of a moving train a circus man observed him. They gathered the boy into the folds of that circus and he became an acrobat. He soon won a precocious fame by nimbly walking on high wires over waterfalls and rapids and doing perilous feats over chasms eight hundred to a thousand feet deep.

In early circus days every show carried a balloon as the free attraction. One of the apprentice performers was obliged to ride the balloon. The balloonist simply sat on the trapeze under the bag and waited until the gas cooled to effect a landing. There was nothing thrilling about the exhibition. Young Baldwin inadvertently said as much to the owner of the circus one day.

"Well, youngster," drawled the veteran showman, looking the boy over, "if you can put some ginger in that act I'll pay you five times as much as you are drawing now."

He told about the incident in the chuck-tent and treated it as a joke and brought on the head of the mortified young apprentice much chaffing. But it did not squelch young Baldwin. He walked up to the owner when the circus arrived in Chillicothe, Ohio.

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"I'll put the ginger in the act on the balloon if you'll stick to your bargain," he proposed.

"What do you mean to do?" asked the amazed owner.

"I'm going to do the trapeze act a mile in the air," answered the youngster.

They did not know whether they dared to permit it. No one had ever performed acrobatic feats on the trapeze of a balloon. It was impossible to secure the acrobat on the bar by means of a safety belt. He would not be able to do his tumbling on the bar. They finally decided to allow Baldwin to try it.

Starting when the balloon reached a height of five hundred feet, he performed all the hazardous trapeze acts that are usually seen inside the circus tent, with a huge net beneath the performer. When the balloon was five thousand feet above the earth the youngster deliberately hung head downward from the trapeze by the toes of one foot!

While riding the balloon to earth toward the end of this historic trip Baldwin had an experience which laid the foundation for the invention of the parachute. When the balloon was four thousand feet high a seam ripped and the gas escaped. The deflated balloon began dropping with frightful speed. Baldwin made up his mind to die. But after an interval he was dumbfounded to feel the speed of the fall checked. It decreased momentarily. He felt that he was approaching the earth very slowly, while the wind carried him on its drift. He looked up and saw that the cloth of the deflated balloon had gathered at the top under the netting from which the trapeze was suspended. In effect it formed a huge ribless umbrella; in other words, a parachute. The boy studied it closely. He swung on his trapeze gently to discover if the parachute would upset. But as the center of balance changed he found that the flexibility of the cloth under the netting allowed the center of pressure to correspond instantly. It dawned on him that it would be absolutely impossible to upset a non-rigid parachute.

He landed unhurt and thoughtful. They praised him extravagantly for his unique act. The owner gave him the increase he had promised. But Baldwin said absolutely nothing about his discovery.

He went to work on the parachute. There were very few books in the libraries on the subject of aeronautics. Those he did find were not very helpful. There was no accurate aerodynamical data, no tables of air-pressures. The eminent scientists whom he consulted pointed out that the last man who had tried to demonstrate his parachute fifty years previously was killed in the first trial. Young Baldwin was wholly self-educated. His methods of working out the formulas he required were extremely crude. But eventually he built a flexible parachute which he believed would carry a heavy body from a great height. His last experiment was to attach it to a dog and then he cast the dog out of a balloon three thousand feet in the air. The dog landed absolutely unharmed. The aeronaut was ready to make the test with his own body.

Dropping at a Dollar a Foot

It was in November, 1885. He was walking a high wire near the Golden Gate Park in San Francisco. The street-car company was paying the fee.

One day he walked into the office of the general manager on Market Street. The official knew him well and liked him, as everybody likes him.

"I've finished my parachute," young Baldwin told him. "I'm going up in my balloon next Sunday and I'll jump out of that balloon as many feet as you order if you'll pay me at the rate of one dollar for each foot."

The street-car man looked at him a moment and looked at his schedule. He found he required an attraction for the next Sunday at Golden Gate Park.

"I'll take one thousand feet of that proposition," he announced. "And I hope you'll live to come in here Monday to collect the tariff."

Baldwin collected the tariff. The performance, to his amazement, made a great sensation. He learned that a number of prominent young men and women had arranged a lively banquet to do him honor. The prospect of being lionized

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by society butterflies almost paralyzed him. Furthermore, he possessed no dinner-coat. In fact, to this day he lacks such a garment. When the organizers of the celebration came to notify him of the dinner he had vanished. At nine o'clock on the night of the banquet they located him in his hall bedroom—asleep. No cajoling, no pleading, no threats could induce him to stir from the bed. They were obliged to hold their banquet without the guest of honor.

Early to Bed and Early to Rise

It is interesting to know that this man, whose success has been largely dependent upon physical wholesomeness and well-being, has cultivated the habit of going to bed at nine o'clock since boyhood. I have not found anyone who has knowledge of any contingency that has ever prevented him from retiring at that hour. His self-control and abstinence are iron. He does not smoke, he will not drink liquors, and nothing can tempt him to eat rich food. And at sixty-one he travels tens of thousands of miles, directs the operation of half a dozen aviators, conducts an aeroplane factory, administers the affairs of an aeronautical school, supervises the production of a new type of air-boat, plans the production of a gigantic dirigible balloon in coöperation with a group of financiers, carries on a voluminous correspondence with ambitious people who seek counsel and advice in all parts of the world, and gives his personal aid and attention to the affairs of at least a dozen friends who have been unfortunate and require assistance.

The handle to his name was bestowed upon him by the impresario who took him on his first trip around the world to exhibit the parachute. As an exhibition money-earner the invention was a tremendous success. Indeed, it wiped out the market for the old-fashioned balloonist so completely that his opposition created a prejudice which caused the lawmakers in New York, Massachusetts, Ohio, Connecticut, and several other States to enact statutes prohibiting a leap from a balloon with a parachute. The law is still in force, though unregarded, on the statute-books of New York State.

The only piece of jewelry the Captain wears is a gold ring with a rare white diamond as large as a small hazel-nut. He was making his first appearance in London with the parachute. King Edward, then the Prince of Wales, attended the exhibition with his family. He stood conversing with the aeronaut when a boy informed the Captain that the balloon was ready. A balloon filled with hot air waits no man's pleasure.

"If you'll excuse me a few minutes I'll come right back," the Captain said.

He swung off the earth under the balloon. Like a black shoe-button he disappeared through a cloud. A few minutes later he came plunging through the cloud minus the balloon. By rare good fortune the parachute landed him within a few feet of where the Prince of Wales still stood. As if nothing very extraordinary had happened to interrupt he took up the conversation where it had stopped. The Prince was so impressed by the young man's nonchalance that he stripped the ring from his finger and held it out:

"Does that fit you?"

It did, so the Captain was told to keep it as a souvenir.

This attention gave the aeronaut a vogue throughout the British Empire. The Aeronautical Society of Great Britain bestowed upon him its first gold medal. The native princes of India decorated him with jeweled orders. We were in his safe-deposit vault one day. He took out a huge box and dumped its contents on the table. As he rummaged among the stuff for something I noticed a glittering cross of diamonds and emeralds.

"What is that?" I demanded, pointing to the jewelry.

"Oh, that's a lot of junk they stuck on me in Europe," replied the Captain. "Take a look at it."

The cross was a Russian order accompanied by a parchment I could not read. From Italy there was a diploma and a decoration which makes him a Chevalier; there was a something from Portugal; a knighthood from Spain, and a ribbon from a scientific society of France. There are curious collars and medals

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from New Zealand, Tasmania, Egypt, Siam, Australia, China, Java, Sumatra, Mexico, Peru, Brazil, and Japan. The tangled mass of silk and gold and gems sparkled and blazed. When I asked him what it all meant he grinned and said vaguely:

"Oh, that's a way those ginks have of being polite to you over there."

And that was all he would say, except that he is very proud of having dined with the Khedive of Egypt, Porfirio Diaz, and Gladstone.

"That's when I went among the brass-collared folk," is the Captain's way of telling it.

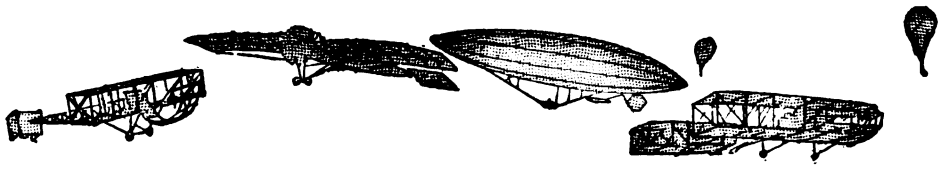
Captain Baldwin built a full-sized aeroplane twenty-two years ago, but he could find no motor to lift it. They were not making light-weight gasoline motors in those days. There seemed little prospect that the aeroplane would be able to earn its keep for many years, so the Captain abandoned it. Things that did not pay were of no use to him.

When the aeroplane became an exhibition fad, the Captain built his own machine. It is red and it is known as the Red Devil. He built the machine at Mineola, Long Island, famous incubator for American fledglings. He was confident he could fly it without practise, and one afternoon he took the machine out. With the throttle wide open, he bounced off the earth before he anticipated it. He was accustomed to air travel, but he was unfamiliar with sixty-mile speeds, and before he knew what was upon him his crimson biplane set a dead course for a telegraph pole. It hit the wires, wrapped itself affectionately around the pole, and left the Captain hanging dazed to a cross-arm.

An ordinary person would have been killed. The panther-like alertness of the old aerial gypsy enabled him to jump for the cross-arm at the proper time. With fragments of biplane clinging to his person he came to earth. A young girl standing near thought the incident so funny that she laughed aloud. The Captain gradually had assumed the appearance of a threatening volcano. This laugh caused the explosion. Such a vivid, forked, blistering, blazing eruption of profanity tumbled upon the landscape that the girl shrieked and ran. When she reached her friends she described it as comparable to her idea of the devastation that might be wrought by "ten thousand red devils." The Captain heard the comment and adopted the name.

The first real aeroplane flight made in the Middle West was accomplished by Captain Baldwin. He flew over the Mississippi River from the northern boundary of St. Louis to its southern extremity, passing under and over the various bridges. He was the man who gave Japan, China and India their first vision of the aeroplane.

And there you have Baldwin—the "luckiest" of aviators.



"A Common-Sense Racing Ice Yacht" is the title of an article by H. Percy Ashley in the January OUTING. Full plans and specifications.

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MEALS CAN BE SERVED AT ALL HOURS UNDER THE SHELTER OF THE FLY

A MODERN PRAIRIE SCHOONER

By ITS NAVIGATOR

ILLUSTRATED WITH PHOTOGRAPHS

How One Man Solved the Problem of a Cheap Vacation Wherever His Automobile Could Travel

THE original camping outfit, here illustrated, has been successfully used in a delightful vacation trip through the Adirondacks to the White Mountains, the Rangeley Lakes, and down the coast of Maine, returning along the northern border of Massachusetts, and has demonstrated that it is entirely practical as a house on wheels. The enthusiastic expressions from many campers and outdoor lovers all along the route indicated something more than an idle interest in a passing novelty. Among the first questions sure to come at each stop was whether the contrivance was patented, to which there was only the reply that no rights were reserved.

The idea is the result of a desire to find a really comfortable camping outfit, ready to start at a moment's notice, without the need of reassembling numerous articles each time, and one that can be quickly erected on any fairly level spot with a minimum of labor and allow a reasonable independence of the usual hotel accommodations which the ordinary motor tourist must seriously reckon with.

Camping with a tent separate from or attached to the side of the automobile had previously been tried out, but presented some drawbacks in requiring considerable preparation, as well as more time to make and break camp, while a suitable location was sometimes difficult to find, and there was a comparative lack of flexibility and freedom to move on without a fixed destination in view.

On the entire trip, consuming four weeks and covering over two thousand miles, heavy rain encountered on the road made it advisable to look for other shelter on one night only. Good weather predominated fortunately, but there

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were plenty of showers and some hard rains and windstorms that thoroughly tested the living qualities of our house under adverse conditions. Aside from maintaining a general course to make a round trip, there was no instance where we had the slightest idea where the next camp would be pitched, and the only thought was to see and live in the beautiful country, stopping one night, or for several days, at some particularly attractive spot as inclination dictated, without strain to make long distances, laying over to loaf or go fishing, or maybe waiting for a storm to blow over. When caught by rain on the road camping was not attempted, although it might readily be done with much less discomfort than with an ordinary tent. It was recreation that we sought, not a record for distance.

In the more settled country where farmhouses were in sight and there was the slightest chance of our presence being noted or questioned, consent of the owner was asked and freely granted, while in some cases an abandoned wood road, lane, or corner of a field behind a hedge gave sufficient privacy and no one else was the wiser.

In return for the privileges granted we purchased from the farmers our milk, eggs, chickens, and vegetables to piece out the supplies picked up at the various towns we passed through, and all, even when no such purchases were made, invited us heartily to come again and often pressed upon us gifts from their table. Such kindly hospitality is refreshing. Once only were we held up and asked to pay for the privilege by an old lady who lives down on the coast of Maine on an automobile thoroughfare near a popular seashore resort. But she was hardly to be blamed under the circumstances.

ALL PACKED AND READY TO START, THE CAR SEEMS LITTLE DIFFERENT FROM THE ORDINARY RUNABOUT

The photographs show fairly well how the camp is used in actual practice and leave but little need for further explantation. A simple box with removable end-board is attached to the rear platform of the runabout. This box being divided, and the upper part hinged at the rear, opens backward and forms a frame somewhat larger than the ordinary three-quarter bed in which are placed a pneumatic mattress, blankets, sheets, and pillows. A hinged foot falls into place to support the rear end when opened and serves the purpose of a luggage rack on top of the box when closed. The end-board is equipped with folding legs with spuds at the bottom ends which are pushed into the earth to make a table of ordinary height.

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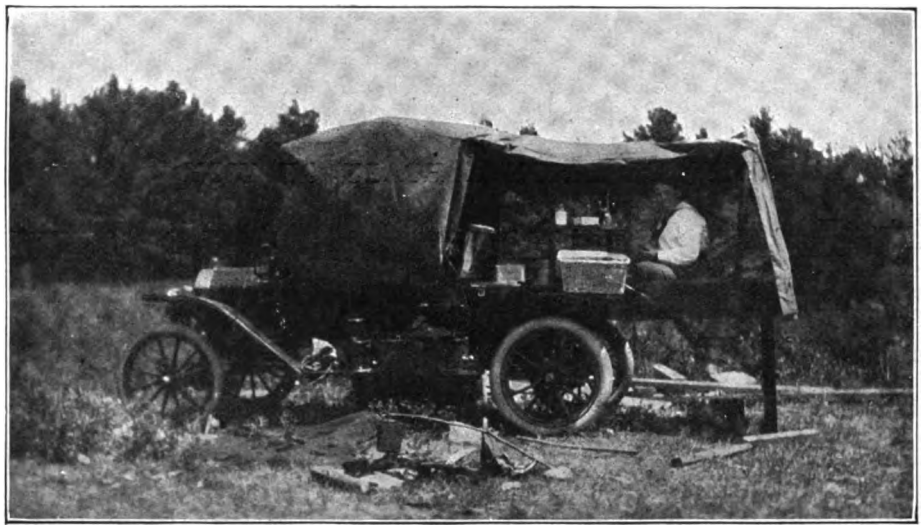

ON A RAINY DAY MEALS CAN BE SERVED ON THE PLATFORM WITHOUT REGARD TO THE SHOWERS

A folding bow in size and form like the ribs in the top of the runabout is inserted in sockets slanting backward and with the top itself forms a support for the waterproof cover which goes over all and buttons down all around. Usually one of the cover sides is extended on the camp-fire side like a tent-fly, as shown in the pictures, being supported by crotched sticks, making a protection from sun, dew, or rain, and additional curtains are buttoned about this side extension, forming an enclosed dressing-room. The cover is made with overlapping seams to which a mosquito bar is attached on all sides of the bed.

Cooking over an open camp-fire is always preferred, but sometimes such a fire is found inadvisable or the woods are wet or fuel scarce, so an essential

AT NIGHT THE PARAFFINED KHAKI DUCK COVER HOUSES EVERYTHING IN SNUGLY

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part of the equipment is a kerosene vapor stove, which comes neatly packed in a small tin box. Then two comfortable folding chairs and a folding lantern are included, as well as the usual camping equipment familiar to all campers; grub basket, food bags, cooking kit, rods, gun, wading boots, camera, clothes bag, thermos bottles, and a large suit-case; it was a surprise to find how much the box would hold and still have room for other odds and ends.

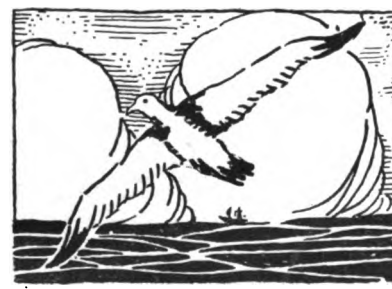
For traveling, the box and end board fit tightly together, making rain-proof joints, and are fastened with trunk-locks at sides and rear end. When not in use the whole thing may be readily dismounted and replaced with the stock-box that comes with the car, but the camping-box, with its full equipment, has in practice been left on the car throughout the season, using the machine for town purposes during the week and at the week end finding it ready, by replenishing the grub basket, to start again for the country for a day or two by some favorite lake or stream. A run of an hour, more or less, will take us to some feasible camping-place much to be preferred to the stuffy city, and the fifteen minutes' light work required to set up camp and about twice that time to pack up in the morning do not present a formidable obstacle to even a very tired person. As an equipment for a party limited to two it has been proved a definite success.

As an answer to the question of cost here are the figures of actual equipment.

Folding box	$25.00
Paraffined khaki duck for cover, 26 yds. 8 oz.	11.18
Making cover	12.72
Refitting mud guards to accommodate box	4.65
	$53.55

Other details of equipment, cots, stoves, food, etc., may be as cheap or as dear as one desires.

An officer in the United States Navy has found a new tarpon field near Vera Cruz. He declares that neither the Texas Coast nor the West Coast of Florida can compare with it. Read about it in the January OUTING.



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DISCOVERING AN UNDERGROUND RIVER

By FRANKLIN S. DEWEY

ILLUSTRATED WITH SKETCH MAPS

A Weird Phenomenon That a Wandering Topographer Stumbled Upon in Northern Michigan

I WAS cruising in a little skiff along the entire coast of Alpena County, Michigan, preparatory to making a complete map of that county. This coast line, with all its meanderings, is more than sixty miles in length, and is fringed by great numbers of charming little islands and inlets, and in places by high cliffs of Hamilton limestone, literally full of very perfect fossils. Indeed, I do not know of any other place so rich in ancient marine animal life. The vast exposed ledges and strata are immense cemeteries in which the buried dead have written their own epitaphs.

Upon the islands, well out in the lake, were swarms of mews, or great slaty-and-white seagulls, with hundreds of nests of large, fine, fresh eggs which, though just a little fishy, were very tolerable and added much to the pleasures of this long exploring expedition.

There were great numbers of the so-called bald-headed eagles, watching their opportunity to pounce upon some poor, luckless fish-hawk which had come from far to secure a breakfast for his hungry family. At one place on Squaw Bay I saw seven of these great eagles ranged along on old dead trees, while fish-hawks were coming to their favorite shallows, but not one hawk escaped with his prey till all the rapacious robbers were fed. They are undoubtedly the meanest bird ever created, and I confess to a degree of satisfaction on seeing that most farcical, pantaletted cartoon of this robber that some deluded artist's devilish malice has fixed upon our modern gold pieces. Perhaps the bird deserves it all. Certainly he deserved the worst that can be dealt him.

Alpena County is deeply indented by Thunder Bay, which has an area of some fifty thousand acres. It is separated from Lake Huron on the northeast by North Point, projecting out some eight or nine miles into the lake. Just across the Point is Little Thunder Bay, well guarded by thickly wooded islands, and long Misery Point, a regular elephant's trunk in form and nakedness. From this bay I entered a narrow, shallow passageway, almost hidden by willows and cedars, and there was revealed a most secluded, charming little inland lake, surrounded in great measure by wooded, rocky bluffs—making a picture such as the eye rarely looks on. Like a pure-white swan the little skiff swam over this field of liquid glass, passing over sleepy, weedy shallows with perch and bass creeping lazily about among the tall bending rushes. I let out my trolling spoon. It was snapped before the line was half way out. Again and again the performance was repeated. Such a hungry, crazy lot is not met with every day.

My boat swam over a patch of water —blue, almost black—and then another. Off at the north was still a third, all in the weedy shallows of only a yard or two in depth. Here, surely, was something to look into.

But it was nearing noon and soon a brisk fire was blazing on the sloping sand and a bass was tantalizingly sputtering. At once I discovered the water slipping up to the fire. It surrounded it, envel-

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oped it—put it out, and somebody there felt like fracturing the Third Commandment. But the trick didn't look commonplace. Who wouldn't mix curiosity with his umbrage? Two more "dudads" were stuck in the sand, and across their forks a "duwhang" was laid, and the "dufunny," with its savory morsel, was pendant over a new fire. (Sap boilers and soft-soap makers need no explanation of these terms.) This was safely elevated and peace was restored; but I kept an eye on that petty, impious inundation while I satiated the cravings of the inner man.

Strange things were going on here. The water slipped slowly back again, and the first embers were uncovered and the intruder was yards away. What is the matter? I must be seeing things; and yet there was no bottle in my kit. Here was a time to think, a place to stay by, something to study and look at. There was no hurry about the dessert. There never is when there is none. But there was at least a suggestion of a recompense for staying around and a self-satisfying excuse was found in weariness.

What is that water doing now? Coming back? It's already covering the old embers and its greedy tongue is lapping the sand close by my new fire. It's time to see about this thing. By means of a little pocket-knife and foot-rule, notches were inched on red willow twigs and set up in low water, and time was noted. As one might expect there was another lazy encore. The water crawled up the slope and up the red markers. I almost held my breath as, snail-like, it covered, one by one, the white notches. Could it be possible? Was it a dream? Eight inches the flood had risen and eight inches it had gone down, just as it had done before—as told by the sloping sand.

It was not a dream. It was not a fiction. All the afternoon the eye never wandered away from it. It was a fact, a stubborn, almost overwhelming fact. Twenty minutes the ebb and twenty minutes the flood—a continuous performance, as if from the great throbbing heart of some gigantic monster down below.

As the hot sun was hiding behind the thickly wooded bluff I scaled the steep declivity. A porcupine was foraging for bugs and grubs among the leaves at the brink of the cliff. He waddled, half tumbled, down into a deep cleft in the rocks and disappeared in the débris. I followed this cleft, this new discovery, for half a mile to the south, where it pinched out—ended. The fissure was several yards in depth, five or six, and two or three yards in width, down to nothing. It was not so dark but that I could see creeping, slimy salamanders down there with red and yellow spots on their slaty skins and dressed in beautiful golden collars. A little green snake was keeping them company, and he, too, was fantastically attired in green coat, a red vest, and a yellow collar. A great, gray owl perched close by, boring the fading light as if he had business in those parts.

'Twas growing dark, lunch was served, and the smooth sand looked good for a camping-place if one were not too squeamish about his new-found neighbors. A few hemlock boughs, the blankets spread, the boat overturned and properly propped and still steeping with wonder at the day's discoveries, I crawled under to sleep and dream of Nature's conundrum. The porcupines nosed around the boat and cleaned up everything eatable, but they were very decent about it. The owl had a doleful tale to tell about the interloper under the boat.

Looking into the Geyser Problem

The morning dawned beautifully into a crystal day and the white skiff soon rested at the brink of the biggest blue patch of water. The weeds, the long, snaky, plumy things—are they alive?—striving to tear away from the vertical walls to reach the light and the still and fragrant air? They are moving, swaying. Is there a rising current, a swelling tide? The movements of those serpentine things are regular, continuous. There is no doubting it. The water is boiling up. Here is a monster spring. It is more. It is a river coming from somewhere. Where?

I studied it an hour or so from the boat, retreated a few yards, anchored, and was soon swimming about in the

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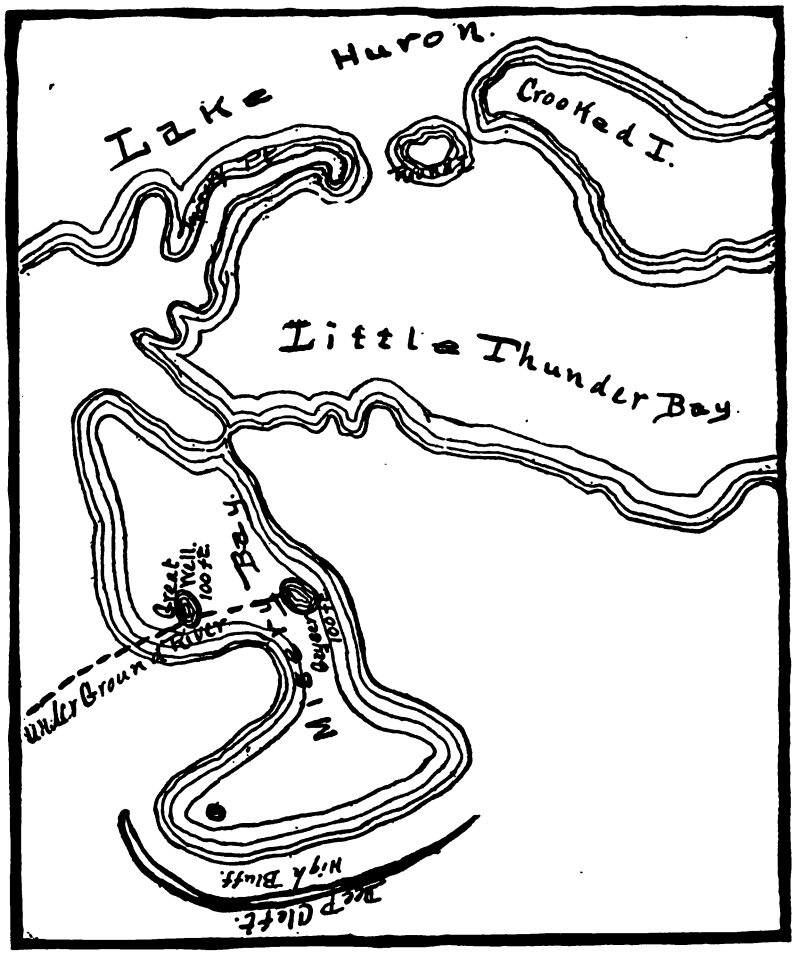

WHERE THE FIRST HINT CAME OF THE SUBTERRANEAN TORRENT

warm shallows. Whatever possessed me I know not, but I soon found myself near the middle of that boiling geyser—for really such it was—but it was by no means boiling hot. I could almost feel myself slipping, as it were, between cakes of ice as I struggled back to the warm shallows. Why will anybody with a little family at home run such a risk of dropping out of sight all alone?

I picked a stone from the shore near by, attached it to my trolling line, sounded the depth of this singular pit, and found it just under a hundred feet. It was more than two hundred feet across. The other abyss close by was of similar size and depth, but not a geyser. The third was a little one, only thirty feet—just still, clear water. I now sought the entrance to this vale of miracles, to find what might be going on there. Nothing but a river flowing out, sometimes slowly, sometimes with a rush, corresponding precisely with the intermittent geyser and the tides.

Just a little figuring revealed that a tidal rise of eight inches in this little bay of two hundred acres meant an inflow of forty million gallons, or more than a million barrels. There was something here to think about and to ponder over. The facts were here—the intermittent geyser, the consequent tide and outflow, a sort of algebraic X and Y as unknown quantities in an equation from which the known must be traced. Here were extraordinary, indisputable facts, miracles, amazing miracles, and who would rest

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till he had read the book of revelations through?

Reluctantly I bade farewell to the enchantment of little Misery Bay, the place of mysteries, but many a time have I returned to those mysteries to find the ceaseless, flowing river, sometimes deep as at first I saw it, but often, as the lake level lowered in the great chain of Michigan, Huron, and Erie, the cold current dwindled to a swift and shallow stream. Dry shod one might then approach to the very brink of the deep, blue chasm. The subterranean pulsations now only affected the overflowing stream. In winter it was the same cold but steaming cauldron, never freezing, for the temperature remained ever constant.

The strange prenomenon at Misery Bay was too deeply interesting to dismiss as a finished investigation. Everybody who knew the woods was plied with questions. Some keen observers had seen strange things in their animal or timber hunting, but most people see nothing that hasn't a dollar tacked to it.

"Why don't you go to the Narrows?" said one. "You'll find a riddle there."

Following Back Along the Line

To the Narrows I went, some six miles northeast of Alpena as the bird flies, but ten by the serpentine trail. There was nothing strange at all—just a long, slim lake—a mile or so—deep and clear. Long Lake poured a little river into it and a creek crept out of it over into Caroline Bay, where, many years before, the steamer *Caroline* was lost.

There came a long dry spell. I went to see this lake again. It wasn't there! In its place was a long, rocky ravine, shaped like the inverted roof of a barn —a synolinal angle some sixty feet deep —dry as a bone, except for the little river flowing in from Long Lake, and this the thirsty crevices swallowed up. Were it not for the clean, smooth rock and the abundant water-washed driftwood, one would hardly suspect a lake had ever tranquilly slept in that bed.

Surely here was another mystery. It was only half a dozen miles from Misery Bay. Could these two phenomena be connected up? Are they in any way related? There was a temptation to jump at an immediate conclusion, and that conclusion that this was the cause of the other. But the temple of science is entered only over the threshold of doubt and extremest caution. This little influx gave but a spoonful for each bucketful boiling up in our great geyser. This may be the first chapter of revelations, but it certainly is not the whole book. The hidden river must be here flowing down below, but this is not its beginning.

Off to the northwest some three or four miles I explored "Le Soupiere du Diable" as the French trappers called it—the "Devil's Soup-Bowl." Here again the rocks had caved in, but it was only a dry hole a hundred feet deep. It looks like another link in the chain. Farther on more were found, some with water, some without. Our course is now deflected to the southwest, and we find many of these giant wells, the largest of which, thus far, is twenty miles west of Alpena, close by the stone road. It is 450 feet across, full of water almost to the brim and "bottomless"—that is, it requires close to a three-hundred-foot line to fathom it. There is no visible inlet and no visible outlet.

We hear of something off to the north now. We pursue the rumors and pass other pits of various descriptions till finally we are three miles from the north line of Alpena County and thirty miles from Misery Bay. I left my horse by the trail and groped my way through the dense underbrush of a magnificent dark virgin forest—of beech and maple, hemlock and lofty pines. Not a half-mile had I traveled when I was abruptly arrested right at the very brink of a yawning chasm. Another step or two—and eternity! There was no warning. The trees and thick jungle hung over the dark, shaggy brow.

Here was something worth stopping at and looking into. I walked around it with measured steps, the best I could. It was three hundred paces. With due allowances, *that* meant two hundred and fifty feet across from brim to brim. By easy triangulation the opposite wall for a base, the depth down to water was one hundred and sixty feet.

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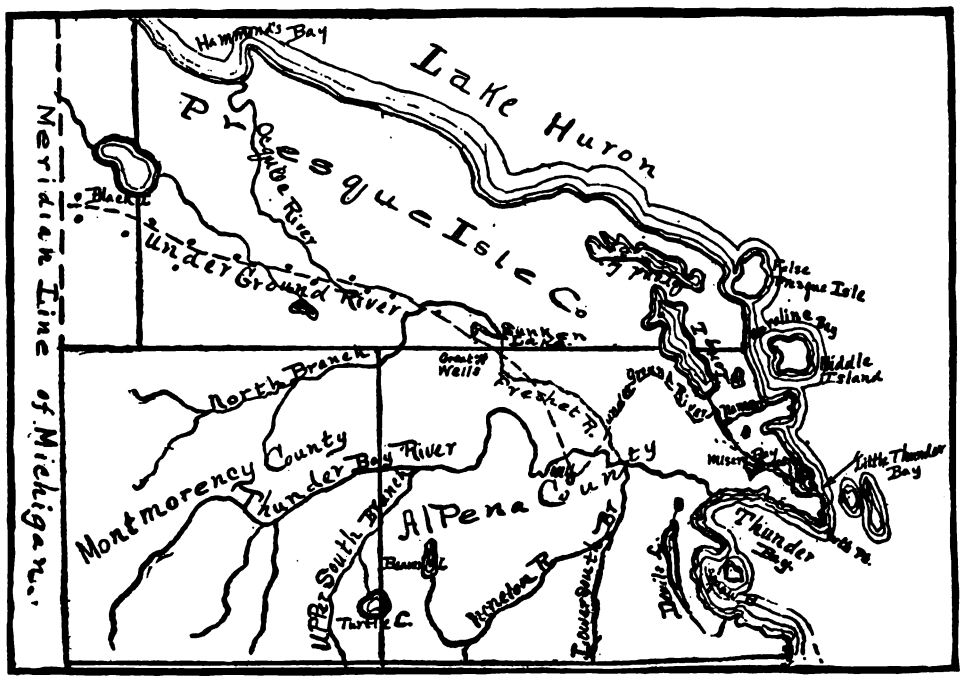
I seized an overhanging, tough, white birch branch and leaned far out over the horrid brink. The walls were perpendicular, gray old dolomite limestone. Friendly lichens, moss, and creeping vines measurably covered the cold nakedness and lent a touch of grim beauty, if such a thing can be. In the dim depths the glassy sheen was almost inky blackness. The chasm was so deep and the trees so thick and high that even a tornado would hardly cause a ripple in that profound tranquillity.

Athwart the surface of the inky water a monster pine-tree lay floating. I found the stump from which it had been cut—three feet across. The woodsman who cut the tree—for it leaned far out and could not be saved—told me that when it swept over to its grave, into which it had looked since Columbus discovered America, it leaped madly from the stump and shot like a huge javelin into the still water and disappeared from sight. It rose slowly, denuded of all its limbs, stood a moment half submerged, and toppled over to sleep and decay. It is quite certain, therefore, that since this tree, a hundred and fifty feet long, had dived entirely beneath the water, the depth of the monster well from rim to bottom must be more than three hundred feet.

In the immediate vicinity, and all within the space of forty acres, four other shadowy caverns were found and similarly measured and explored. Save the one described, all were dry, perhaps permanently so. In one were a few great pines, tall and straight, just striving to peek over the rim. For several hundred years the great prison walls had hemmed them in without hope of pardon or release. Would it be sacrilege to call this holy ground? But there are other chapters, many of them, in this book of revelations, and not the least by any means is the subject for the next.



THE COURSE OF THE RIVER FROM SOURCE TO MOUTH

Slowly winding through a wild and rugged region, I crossed into Presque Isle County. Suddenly, between the trees, was revealed a long, deep defile, with a foaming river rushing down. 'Twas a mile in length—high, sloping

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rocks on either side. Where is this river hurrying to, as it runs deep and deeper in its headlong course? Presently the gorge abruptly terminates. High, circular walls surrounded a whirlpool some two hundred feet across.

On the surface, in wild cotillion, driftwood is madly racing. Through a narrow, rocky gateway the river plunges tangentially into the eddying vortex. I gaze in wonder and amazement at the dizzying scene. There is about it such a wild strangeness, such an uncanny, inexplicable something that one wonders if it is not all a dream. In the great throat of this pit a hundred and fifty feet deep the river is all swallowed up and disappears.

I have visited this gorge in time of freshet. There was no deep and cavernous abyss, no gorge, no rushing river —just a long, slim, deep, peaceful lake over a mile in length. There was no whirlpool, no scurrying driftwood—the gorge was full. The same river, with greatly added volume, was flowing on as before at what was the top of the gorge and directly opposite was rushing out again. The volume, however, flowing out was vastly more than what was coming in by the surface river. The old throat, which had heretofore, at the whirlpool, been swallowing the river down, was now vomiting up far more than was coming in by the surface stream.

Tens of thousands of logs cast into the vortex during winter were lifted up and thus swept out of the lake down by the regular channel into the main river and down to Thunder Bay. The "North Branch" was no longer a "Lost River," but a continuous one for more than fifty miles. Far to the northwest were found scores of other pits, with their great mouths open to the sky, many of them swallowing surface streams of lesser magnitude. To add to the wonders of these extraordinary phenomena, some of these great wells became at certain seasons a veritable porridge of fishes. Later the same wells ran dry.

For many weary days I laboriously followed the general direction of these enormous pits for thirty miles farther, the last of the series being close to the meridian of Michigan. It was no longer to be doubted now that all these strange phenomena clearly marked the general course of a subterranean river. Not far from three hundred of these great, open-mouthed witnesses bore silent evidence that the most incredulous must believe. As the crow flies it is sixty miles from the source of this mysterious river to Misery Bay, where it reappears in the great geyser and mingles with Lake Huron. Some of these pits bear evidence of great age; but all, of course, since the glacial epoch. Some are clearly recent.

There is little of mystery in their making. The entire course of the river is in Hamilton limestone. Ancient earthquakes have shattered and riven these rocks, leaving deep, narrow fissures into which the surface waters crept. Some of the strata are full of sulphurets of iron and copper. The chemist will tell how, from these, sulphuret of hydrogen is generated and how it, in turn, attacks the carbonate of lime, changing it to a sulphate which slowly dissolves in water. A little stream creeping into the crevices gnawed the rocky walls away. The gases aided. The channel is yet too small for seasons of flood but is growing. Caverns were formed, growing into great domes. Trickling surface waters, aided by the dissolving gases, enlarged the domes till all the superstrata were eaten away and the crash ensued. Thus were created these amazing riddles of the woods.

An article by Mack Whelan on the Athletic Revival in Europe as a result of the Olympic games is one of the features of the January OUTING.

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THE SEDUCTIVE SKI

By A. E. SWOYER

A Fall of a Man Who Leaped Into Fame Against His Will and Then Ran for His Life

WEBSTER defines the ski as "A Norwegian snowshoe; a sort of foot-toboggan——"; I should describe them in the terser, more pointed idiom of General Sherman in his oft-quoted reference to war. Moreover, as a more or less celebrated manufacturer of cereals says, "There's a reason!" This being the case, we may begin at the beginning, as is right and proper.

As usual, the beginning is with Smith; since our first meeting he has been my evil genius. He inoculated me with the germ of golf, he introduced me to the insidious Demon Rum, he taught me all that the human mind may know of poker—he almost induced me to buy a motorcycle. Wherever I have skidded a little on the straight and narrow path, Smith's hand has been on the steering-wheel. Nevertheless and notwithstanding, the man has a fascination for me; I am as pliable in his hands as a chocolate-cream on an August day.

This being the case, when he suggested that we take a run up into Canada and have a look at the Winter Carnival, I was powerless to resist, even although I knew that Smith and trouble are as inseparable as fly-paper and one's best suit. True, I struggled a little, but the siren voice of the tempter overruled my objections, and, when he promised on his word of honor that we would be onlookers only, I fell. Had I but known what a prominent part in the festivities we were to take and what a large proportion of the entertainment we were to furnish, not wild horses nor even my mother-in-law could have dragged me from the safety of my office.

With the bravery common to the foolish and the heroic we set out, therefore, and, however unusual it may sound in these days of precarious railroad travel, we arrived. A huge hotel, decorated with flags in honor of the Carnival, swallowed us up, and we retired—Smith no doubt, to pleasant dreams of the morrow, and myself to shivering dread of that same. I believe in premonitions—where Smith is concerned.

The morning came all too soon, and I was aroused from the heavy sleep into which I had at last fallen by a tapping at my door; a moment later there entered, not Poe's raven, but a bird of equal ill-omen—Smith. And such a Smith! Upon his head perched one of those knitted red caps with long peaks and tassel, such as are affected by skaters and the reason for whose existence is lost even to tradition; about the upper segment of his circumference flapped Joseph's coat of many colors in the guise of a Mackinaw; his feet were encased, surrounded, and overwhelmed by a pair of those sublimated, battleship-brogans known as shoe-packs. And, horror of horrors,

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upon his arm he bore a duplicate outfit for myself!

Silencing my protests against assuming the attire, which he insisted was the correct and proper rig even for onlookers at a Winter Carnival, by removing my other clothes, he left me—to meet again, as he said, at the breakfast-table. I was too kind-hearted to subject the guests of that hotel to the vision of two such clothed aurora borealises at once, and put one across on him by having my meal sent up, but Smith could not be permanently eluded; the completion of my breakfast found him waiting at the door. Seeing that there was no escape, I yielded with all the resignation possible under the circumstances, and we set out for the scene of action—followed by a cheering crowd, whose presence I was unable to account for except by the charm of our personalities and the gaiety of our wardrobe.

Reasoning in this manner, we accepted as our due the sleigh which waited to convey us up the hill, upon the top of which the carnival was being held—hill, did I say? Precipice, rather! That hill had a slope of at least ninety degrees; peering over the edge was like looking down into the Grand Cañon, only a little more so—it was some hill, believe me. Running down it was a sort of a devils' chute of snow beaten and polished to the glassiness of ice. As we plodded toward the summit, I noticed a few specks at the top of this chute; with incredible speed they enlarged to the size of men, shot past us, and were gone!

Breathlessly I looked at Smith to see how he took this dash of half-a-dozen human beings to sure destruction, to find him calmly surveying the scene over the top of a callously up-tilted cigar.

"That's skiing," he announced, nonchalantly. "They have sort of toboggans six or seven feet long strapped to their feet (he'd been reading Webster), and they use those long poles as a combined brake and balance. Down at the foot of the hill they rig a sort of bumper or take-off, as they call it; when they hit that they shoot off into the air. The idea is to see how far you can jump before hitting the track again—keeping right-side-up, of course."

"Heavens—isn't it dangerous?" I stammered.

"Some people think so; I understand that a beginner can't hire a pair of skis in this town without a doctor's prescription and a cancellation of his insurance policy. Myself, I don't think it's much of a trick—just keep your feet, that's all."

I viewed the course with a shudder; to negotiate it might not be "much of a trick," but it was one that I would not attempt for a million dollars or so. "What's the record for jumps like that?" I asked, with the same morbid curiosity a man might betray in inquiring as to the number of volts necessary for electrocution.

"Something under two hundred feet, I believe," drawled Smith, "but I should think that a man could do better than that. You're going about a mile a minute when you hit the take-off, and you've just naturally got to keep on going until gravity pulls you down. I'll bet," he continued, his chest puffing out in that old position which I knew so well, "I'll bet *I* can do three hundred!"

An Embarrassment of Popularity

Before I had time to answer we had reached the summit, and were once again surrounded by an enthusiastic crowd whose noise made speech impossible. This continued ovation was getting on my nerves; I looked as far back into my past as the spy-glass of memory would permit, and for the life of me I couldn't think of any deed of mine which would call forth the plaudits of a multitude. I began to be pretty certain that this bunch of Canucks were kidding us, and that our costumes were the reason therefor—I'll admit that there appeared to be few others like them among those present.

It should have been apparent long before this that I am naturally of a timid and retiring disposition, and if Smith had erred in his selection of a wardrobe for us, I much preferred to remain in the sleigh beneath the security of the buffalo-robes, but it was not to be, for, cheering still louder than before, the crowd plucked us bodily from the vehi-

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cle and carried us about on their shoulders. Smith took it all as a matter of course, and quite as if he were accustomed to this mode of greeting whenever he went forth in public; his fat, round face beamed joyfully, and from time to time he removed his asinine cap and waved it gracefully. For my part, I objected hotly, and signified my disapproval by means of kicks and struggles, until I saw that it was of no avail and gave up.

In a few moments the ordeal was over, and we were unloaded at the start of the slide, from which the crowd was being cleared away by some persons evidently in authority. Two men came forward, each carrying a pair of skis, which they placed before Smith and myself; I stepped back hastily, but was brought to a stop by the wall of humanity massed behind me. Smith was too astonished to move, and stood limply while they fastened the contraptions to his feet!

Meanwhile, an official of some sort stepped forward and raised his hand; in the silence that followed I could clearly hear his announcement that Messrs. Svensen and Skjarsen, of Norway, were about to attempt to break the ski-jumping record. I gazed around with interest, in spite of my bewilderment, to see the fools who were going to make that devilish glide—and saw no one but ourselves within the circle of faces! Light broke upon me; through some mistake, due probably to those freak costumes, we had been taken for the Norwegian heroes, and unless we did something mighty quick, we—poor boobs that we were—*we* were going to be shot down that precipice!

Paralyzed with fright though I was, I started to my feet to explain—but too late. A man had already pushed Smith, like a huge sled, to the brink; another shoved a steering-pole into his hands. He, poor fool, really looked as though he enjoyed it—that man would willingly permit himself to be burned at the stake if he could find some manager to guarantee him an audience—until he glanced over the edge. Then he turned a sickly green color and tried to turn around; it was no use, for out of courtesy the natives were going to give him a flying start, and a mighty shove sent him on his way.

I never saw a man vanish so quickly. He dwindled from the size of a balloon to the apparent circumference of an orange in less than a second. He dug his pole at the snow in an effort to stop; it was wrenched from his hands and twisted like a straw in Niagara. A moment later a puff of snow signified his arrival at the take-off; comet-like he shot through the air, his limbs pointing in four directions, and the absurd tassel of his cap trailing straight to the rear. A vast upheaval in the snow apparently half a mile or so below proved that he landed, but whether or not he was damaged in transit I could not tell. Loud cheers came from below, and that was all. The rest was silence.

I had watched Smith's rapid departure with such breathless interest that I had forgotten my own destined part in the proceedings; a hand upon my shoulder apprised me of it, and I, too, was shoved toward the precipice. I did everything that I could to hold back, but my feet were strangely beyond control—one moment they followed such divergent courses that I feared for my entirety, and the next they toed-in like a bashful school-girl speaking her first piece. Then my skis became crossed and I stopped—or rather, I would have stopped had the brawn arms that were propelling me permitted it; as it was, I simply dug up a deal of the path before my guardians righted me.

A Drop Too Much

In an instant, it seemed, I was at the beginning of the slide, which fell away from me with sickening abruptness; a second later I knew exactly how it feels to drop two or three thousand feet in a parachute. I tried to stop, first with the balancing-pole, which I lost exactly as had Smith; next by digging my heels into the snow, but the process with heels four feet long was not a success, either. In the infinitesimal fraction of time that elapsed between the start of my journey and my arrival at the take-off I lived not one life-time but three; now the latter loomed before me, and without having

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time to even catch my breath for a last despairing shriek, I was hurled far out over the valley.

The shock straightened me into a standing position, and for the first portion of my flight I remained erect; but soon I was revolving like a pinwheel. I saw the crowd and the course far, far beneath me; how many times I saw them I hesitate to say. I seemed to have severed all connection with this world of toil and sorrow, to be going up and up——.

Then, suddenly, "Bump!"—and I had landed with such a shock that the end of my spine pushed my cap off. Yet by some miracle I had struck feet first, kept my balance, and glided smoothly down the balance of the course, to come at last to a standstill.

But I did not "stand still" long; with trembling fingers I loosed the thongs which bound the skis to my feet, tucked them under my arm, and with the best possible speed staggered off through the deep snow toward the city. Far behind me a roar of voices echoed—you can believe that I did my best to keep it behind me, too! By holding a pace of which I did not believe my middle-aged bones to be capable I outdistanced all pursuit until, at the edge of the city, I found a solitary cabby who, in consideration of a most extortionate fare, conveyed me to my hotel.

To Repel Boarders

Without waiting for the elevator I leaped up the stairs and tried the door of our room; it was locked! Nevertheless, I heard someone moving inside, and after what seemed to be an eternity the door opened wide enough to permit the egress of the tip of the inmate's nose—it was Smith; I'd recognize that proboscis anywhere.

As soon as my identity was equally well established he let me in and closed the door after me, double-locked it, and pulled the bureau across its face. Although his precautions seemed hardly necessary, as long as he had taken all that trouble a little more would do no harm, so I added the bed to the barricade. Then, for the first time in what seemed to be an eternity, my breath came with its accustomed regularity!

Smith had evidently been putting in his time in packing while waiting for my arrival, and announced that we would leave for home on the first train; this course had my hearty approval—for once Smith seemed to have some sense—although I regretted that we could not make our departure still earlier. I was in such a nervous condition from my late experience that the very thought of winter nauseated me; a pitcher of ice-water gave me a chill, and I believe that the sound of a sleigh-bell would have thrown me into convulsions.

We learned from the clerk (over the telephone) that no train for civilization left until late that afternoon; reconciling ourselves to fate, we ordered our dinner sent up, and settled down to wait behind our fortifications with such resignation as we could muster. It must have been nearly two o'clock when we were startled out of our fancied security by the tramp of many feet in the hall, followed by a knock upon our portal.

Smith turned pale as a sheet; as for me—well, something that I couldn't seem to swallow rose in my throat, and my knees and teeth kept time in their knocking. It could be nothing else than our tormentors of the morning come to take us out to the Carnival for more sport, and we resolved to die rather than yield. Finally a key grated in the lock, and our barricade was forced slowly back; Smith and I assumed a "die-in-the-last-ditch" expression, and waited.

A regular delegation entered, headed by a man bearing a loving-cup at least four feet high.

"Behold the bashful Americans!" he addressed his legion, waving an airy hand in our direction. "They enter our tournament incognito; they win the grand prize—and then they disappear!"

We gazed at each other in astonishment; there was only one thing to do, and that was to sit tight until we saw what manner of jest was to be perpetrated.

"Mr. John Henry Jones," he went on. Involuntarily I arose, and he extended the loving-cup. "It gives me pleasure to turn over to you the trophy

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which you so nobly won. Through a regrettable mistake, we took you to be the famous Norwegians; after you broke the existing record with your marvelous leap, Mr. Svensen and Mr. Skjarsen arrived. In their trials they failed to equal your performance, so that you are the undisputed ski-jumping champion of the world!"

Well, what do you know about that?

"That this championship must leave Canada is of course a regret; but since it must leave, it is an honor to have it pass into the hands of so capable and modest a gentleman as yourself. Gentlemen, the freedom of the city and the keys to all Canada are yours!" So saying, the procession filed out.

Still suspicious of a joke, Smith and I went over and inspected the loving-cup—there was no joke about that; even the engraving corroborated the words of the embassy. By some fluke I had broken a record!

"Some cup we won, eh, Jonesy, old boy?" gloated Smith.

For once I rose to the occasion. "*We?*" I inquired, scornfully, and pointed to the inscription—"To John Henry Jones."

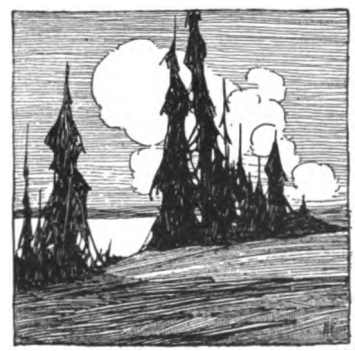
"Well, *you,* then, if you want to get mean about it!" snorted Smith. "Anyway, we'll just hang around for a few days and enjoy that hospitality they talked about. We'll be heroes, boy!"

"We will not!" I broke in decidedly. "To-morrow we'd have to do some more exhibition jumping"—Smith's ruddy smile suffered an instant and total eclipse—"and you'd only make a fool of yourself again. We'll catch that train, and if anybody ever sees us up this way again, I hope they shoot us! That's all I hope."

It took some argument to convince Smith, who wanted to stick around and strut for a few days; but just before train-time a boy come in with a challenge to meet Svensen and Skjarsen in a match at special and fancy skiing, so Smith finished cramming things into his grip in a hurry and we lit out. Luckily, beyond a few cheers and a brass band which failed to keep up with us, we made our escape unnoticed.

Which is the reason why I, John Henry Jones, undisputed ski champion of the world, say that the implements with which I reached my pinnacle of glory are an invention of the devil. I am content to rest upon my laurels; content to have defeated Smith in his designs upon my happiness; content to be still alive. In my home ice-cream and even snow-pudding are taboo; we spend our winters in Florida, and I am not calm in any temperature less than ninety in the shade.

Let him, then, who would disturb this calm beware!



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SHOOTING THE GERMAN QUAIL

By CURTIS NYE SMITH

How the Fatherland Preserves the Game, Has Fair Sport, and Makes the Game Pay Part of Its Keep

MANY American hunters hold the opinion that there is not much real sport in bird shooting in European countries. Beaters driving hand-raised grouse or pheasants to immaculately dressed sportsmen standing, or rather comfortably seated, in blinds, with "ghillies" or "jungers" loading the guns and carrying the game, all rather partake of the character of pink-tea parties to our rugged hunters. They expect some very hard tramping and rough handling by bushes and briers for the sake of the three partridges a day and fifteen a year which the law, as in Massachusetts, allows them to bag. At least the writer has often heard American sportsmen utter remarks of such tenor. Really the difference in conditions between America and Europe is so very marked that one must join a shooting party in the foreign country in order to come to a just appreciation of the merits of the case.

In the United States most of the State laws require hunters to obtain an annual license to shoot game, for which license a nominal fee is charged. Naturally, a large proportion of the male inhabitants secure this license and at every available time and sometimes, at unlawful times, rush without legal right into the fields and woods, the property of other people. To be sure, the law restricts the shooting season to a short time, sometimes only two weeks. Also day and season bag limits are fixed by statute. Then in the United States gentlemen never sell their birds. In fact, the selling of certain game birds in most of the States is absolutely prohibited by law, a necessity under the conditions existing in our country. And one more prominent characteristic of our shooting is that however hard we tramp and rough it, we cannot bring home in our bags many birds, for the reason that they are not to be had. Of course this remark applies especially to the Eastern States. We must also note the rare exceptions where private game preserves have been established at a cost only within the means of the exceedingly rich.

This brief review of the conditions limiting the shooting of game birds in, at least, the eastern portion of the United States, is not, of course, given for the mere purpose of stating well-known facts, but to show in what a different way game shooting is conducted in Germany. Everything as previously stated is quite the reverse in that country. A short account of some recent delightful shooting parties, in which the writer was most courteously included, may bring out these differences, as well as interest the sportsman.

Rhine Hessen is that delightful agricultural province in southwestern Germany, shielded from the cold northern winds by the Taunus Mountains, through which the swiftly flowing Rhine has forced its way. Mountains protect it on the west, other large hills on the south. The Rhine defines it on the north and east. It is very much of a rolling country, sometimes with sharp hills, but usually with those long, easily sloping hills which form so much of the French landscape. Indeed, this province, with Mayence (now Mainz) as its chief city, was once one of the proud possessions of France.

Every acre is highly cultivated under the well-known system of rotation of crops. This crop arrangement gives the

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country rather a strange appearance, as if huge green, pink, yellow, and crimson strips of carpet had been placed over the earth, completely covering it. There are almost no trees, except sometimes along the roads a few fruit trees. About the little villages are usually clustered some orchards of plums, pears and very poor apples. Another feature of this landscape and one that has considerable effect on the game birds is that on these rolling acres there are no farmhouses or buildings with the usual dogs, cats, and so forth to harrow the nesting birds. The French and Germans are too social to live apart. Consequently, they have their homes, barns, and all buildings in little villages, which are almost always situated in the valleys about four to eight kilometers apart. One can stand on the top of the hills and look for miles without seeing a sign of habitation except, perhaps, the top of a church spire above the waving grain fields. There are no fences, no hedges, no pastures, grass meadows or woods, no cover of any kind except these cultivated fields and, in certain valleys through which a small stream may flow, some few trees.

Such a country is ideal for quail. It is considered the best quail and hare country in Germany. No wonder the game birds are very numerous, healthy, and delicious eating. The conditions are almost perfect. The climate is temperate. The vast breeding grounds are unusually safe, being undisturbed by people, dogs, cats, foxes, but alas! there are hawks. The extensive grain fields not only afford the best of feeding grounds, but also a natural cover. After the harvesting of the cereals, the birds still have excellent cover in the patches of potatoes, beets, alfalfa, and clover. After the vegetables and clover are gone, there still remain the grape-vines and the clumps of trees along the water-courses. In addition to all these natural conditions, the method of shooting is rational and has shown no indications of diminishing the very large number of birds.

This great province of hundreds of thousands of acres is accordingly one vast game preserve for quail and hare. The Germans, with their usual thrift and conservation of natural resources, have made of their game a great asset in a way which is novel, likewise impossible, to us Americans. While the farmers can, and often do, own their farming land (and they pay rather dearly for it, 400 to 600 marks, $100 to $150 per Prussian acre), the Government holds, one might call it, the trusteeship of the gaming rights to the land. No owner of land less than 300 Prussian acres in amount can shoot on his property or have any right to game or to interfere with it.

No Real Discrimination

This is not so hard as it seems. In the first place, the peasant is quite a different person from our American citizen. He is accustomed to a paternalistic government, to the superior rights and dignity of the so-called higher classes, and he is so thrifty he would not think of buying a gun and spending money for ammunition. Consequently, there is no call of the blood for shooting. So we see in Germany only a small class of sportsmen—the nobility, officers, the professional men, and the successful business men. But the small land-owner is not without compensation. The mayor of the town, the smallest political unit, lists all the land in his territory, not exempt because of its large size, divides it up into suitable blocks of, say, 1,000 to 5,000 acres, and auctions off the shooting privileges thereon to the highest bidder for a term of six, nine, or twelve years—preferably the short term. The prices naturally vary, but the current price for recent leases may be said to be about one mark per Prussian acre per annum.

The holder of the lease has to perform certain duties: he must do no damage; he must keep the game within such limits that too many birds or hare will not unreasonably interfere with the crops. For example, a recent paper states that the Government has ordered the lessee of certain shooting rights to kill off fifteen deer. In case of damages, the lessee, and not the Government, as in our country, must pay them. Further, the lessee must employ, to watch things, a keeper, who is usually a citizen of the

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town. This man, in case of severe weather, feeds the birds and erects suitable shelter. He provides the *jungers* (attendants) for the hunters, assists in the mapping out of the hunts, and usually is a good shot, so that he can help kill the game.

In the township the writer shot in one lessee shoots Monday and Thursday, another Tuesday and Friday, and the third, Wednesday and Saturday. This keeps the birds moving and not all flying to one unhunted section as a refuge. The money secured from the leases is proportionally divided among those whose land is leased, and applied to the payment of their taxes, which in Germany are horribly high, something over ten per cent. Therefore, the land-owner does not have an unfriendly feeling toward the hunter. We often came across the workmen in the fields. They were always pleasant, it seemed unreasonably so, when we were plowing through their vegetables, clover, and alfalfa patches. When the writer started on his first hunt he carefully avoided the cultivated ground, as is customary in America. He was shocked, however, to see his German hosts, generally so careful not to trespass on other people's property, apparently so inconsiderate of the farmer. But nobody seemed annoyed.

It is true that while the season opens on August 23d, extending to January 1st, no shooting is actually done until all the grains have been cleared off the land. This meant that this year the first shooting party went out about August 27th. Very little if any bird shooting is done after four to six weeks, by which time all the fields have been cleared—so the birds are carefully preserved for the next season.

The manner of hunting is typically German. A good-natured party of four to ten men, according to the size of the preserve and number of birds, motors over the wonderful roads to the agreed rendezvous at an inn in the town near which the hunt occurs. The gamekeeper is waiting with the dogs and "jungers." These "jungers" are boys, or young men, who carry the knapsacks containing the luncheon, wine, ammunition, and what-not. The boys also carry the game, which may be no light task. Sometimes these jungers are a great help to the hunters in finding the game. In the frequent cases where a bird falls before two guns, a good "junger," interested in the prestige of his employer, will somehow get the bird. Of course, the hunter is busy doing something else and does not know about the little altercation.

Friendly but Thorough

At the rendezvous, everybody is smiling, some are singing snatches of jagd songs, and others are drinking light beer. The hunters greet the new arrivals with enthusiastic hand shakes, so that the stranger, though his German is like a stab in the back, quickly feels at his ease. On these occasions the usual social lines are not so rigidly drawn—one of the good points of hunting. After the party is assembled, the host and the gamekeeper, or "jagder," have a long conference over the arrangements of the day. To the quick-acting American the talk seems exceedingly long, but it is noticeable that the plans, once adopted, are complete and give everybody a fair chance. Then the several parties disperse—some going by motor to the far end of the preserve, a few miles away. Some of the parties meet later in a little village inn, where they drink very cheap, poor beer and eat their luncheons. More often the hunters eat in the fields.

About five o'clock the hunters return to the rendezvous, spread the game out on a long table in the garden, and count it. If any hunter wants to take home some birds he pays for them, usually one mark ten pfennig for the young and eighty pfennig for the old birds. All the game shot by the guests belongs to the lessee for a good reason. Paying such a round sum for his hunting privilege, German thrift demands, and quite naturally, that it shall not be all outgo. All the birds are therefore sold to poulterers by contracts usually made for the whole season and for all the birds and hare except those sold to the hunters. In the smallest preserve, something like 1,100 acres, over which the writer shot, about six hundred and fifty quail and

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four hundred and twenty-five hare (at over three marks the hare) were bagged last season. Consequently, shooting need not be too heavy a drain on the purse.

And now for the birds! The writer chooses to call them quail. They are called "Rebhuhne" by the Germans. The word means grape hen. The Germans gave several translations in English—partridge, chicken, and prairie chicken. To the writer, the bird resembled the American Eastern quail. In coloring it has the characteristic grays and reds of our bird. It also flies steadily on a predetermined course, though not so rapidly. It lies very "close," indeed, the hunter can often pass within two feet of a bird, only to flush it when his back is turned. It is a strong runner, and usually will not rise until the cover ends. It keeps in coveys and when dispersed gathers together again by calls. On the other hand, the German bird has a longer neck, longer wings, and a more slender body than the quail. The rebhuhne is almost twice as large as our bird, about the size of a pigeon.

How the Shooting Is Done

A typical method of hunting these birds is for two hunters to walk slowly along the outside of the strip of potatoes, beets, etc., potatoes being the best cover, sending the "jungers" and the dog through the vines, all being parallel and marching very slowly. If the dog is good, he will, of course, give prompt notice of the presence of game. Then follows a slow forward movement until the birds are flushed and the fun begins, or, as is more usually the case, the birds are driven along by the slow movement of the hunters to the edge of the row. There they wait, before flushing, hoping that the danger will pass.

When the reader understands that a covey is flushed in one out of every, say, four patches (these patches being about ten to fifty feet wide and one hundred to three hundred yards long) he can imagine the constant excitement and thrill of the sport. It must be admitted that, to the hunter of the American ruffed grouse, accustomed to snap-shooting in bushes and trees, the shooting is not difficult, especially as most of the shots are within twenty-five yards, usually half-quartering, many nearly straight away. On the other hand, the sudden rush of wings of ten to thirty rising birds robs many a man of his nerve and he fires too hastily without covering a bird—a fatal error in covey shooting.

It is true with the German quail as with ours, that after a covey has been broken up the birds will lie "close." If one has a good dog this is attractive shooting, but the Germans do not care to follow birds. They have the ground all mapped out as if it were a battlefield, each party having his course. This system must be followed, so they weave back and forth among the vegetable and clover patches looking for new coveys to conquer.

An ingenious device used by the Germans was quite novel to the writer. After the crops are gathered and the rebhuhne are feeding on the grain stubble, of course, they see the hunters a long way off and "flush wild." Sometimes, too, before the crops are gathered because of weather conditions, or perhaps from constant shooting, the birds run without flushing. Then the hunter pulls out a roll from his knapsack and unfolds a kite, which closely resembles a huge hawk. The "junger" runs with it to one side so that the imitation hawk flies about fifty feet above the hunter and in front of him. The frightened rebhuhne hug the ground and flush only upon close approach. They will not run. The writer tried the scheme and it worked perfectly. Of course, the reader will see that the absence of trees, as above described, makes this trick possible.

So quail hunting in Germany demands good shooting and knowledge of the birds. It is the German system which preserves the game, supplies a large amount of excellent food, makes the sport not too expensive, yet places the cost where it belongs, and always gives the hunter a full bag and pleasant memories.

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CHOOSING THE LIGHT-WEIGHT MESS KIT

By CLAUDE P. FORDYCE

ILLUSTRATED WITH PHOTOGRAPHS

Cooking Outfits for Camp and Trail That Meet the Test of Strength, Lightness and Compactness

WHEN one goes into the wilderness he will suit himself as to what he will take. He may elect to go it "De Luxe" with an expensive and elaborate outfit carried in wagons galore and handled by a host of flunkies who encumber the rocky stretches and forest floor with various artifices of a luxurious civilization. Or he may be a true disciple of the Red Gods, going light, throwing off the fetters of restraint, emancipating himself from the world of subterfuge and becoming a worthy dweller in the land where Nature has been undefiled by the desecrating hand of man.

This Nomadage is the ideal way if you want to "do" the trick of getting close to Nature properly. Pitch your camp wherever night overtakes you—to-day near the tranquil lake which stretches away to the distant hills that lead up to snow fields and cloud-enshrouded pinnacles—to-morrow establishing the little bivouac in a clearing encircled on all sides by the unbroken chain of silent pine forest.

If you plan on returning happy from your outing, which you may have chosen to take *à la* vagabondage, you must "go light"—an admonition resplendent with pet ideas heaped upon your willing head by cocksure bunkies, yet nevertheless fraught with forebodings of solemn portent to you—the unexperienced. It goes without further comment that the less you carry on your back the less will be your fatigue at the day's end—the smaller the burden you carry in your pack the more must be your knowledge of how to live comfortably with simple equipment and how to employ the artifices of woodcraft in utilizing Nature's primitive stores.

A man traveling light must of necessity deny himself many things that under ordinary circumstances are deemed essentials. The selection of an outfit is a matter of individual temperament based on experience. What one calls a necessity another calls luxury, yet this same luxury, if the second man wants it bad enough, becomes forthwith a necessity.

When you have to carry your own kit day after day the number of things you can do without is extraordinary. You will have "boiled it down" to the essentials when you carry it from one season to another without adding to or subtracting from it. This, then, is *your* ideal kit, for it has withstood the "acid-test."

It is really astonishing what small amount of duffle is needed for camping out. Practical woodsmen have learned to supplant the handy contrivances of civilized usage by substituting with what the wilderness offers. Apropos, in the culinary department one really does not need a city bakeshop oven or even the Dutch oven or clever reflecting baker; very acceptable breadstuffs can be coaxed out of a combination of camp-fire heat, dough, and the much-abused frying-pan. Indeed, the frying-pan itself may be discarded, and in such a contingency he can make good bread by winding dough around cleaned sticks and slanting them

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FIG. 1. THE COMPONENT PARTS OF THIS OUTFIT ARE EASILY PROCURABLE
The author's own outfit which has stood the test of use—cup, knife, fork, spoon and canteen.

up by the side of the fire. Such breads I have heard called "dough gods," but whether of the world below or above depends on the cook.

Many cook outfits offered by sporting goods houses are too complete for a place in the hiker's kit, in fact their very completeness renders them impractical because of weight, bulk, and the number of utensils to be kept track of. They are made more in answer to the call of city sportsmen who, as a rule, favor more elaborate equipment throughout.

In choosing a cooking outfit lightness

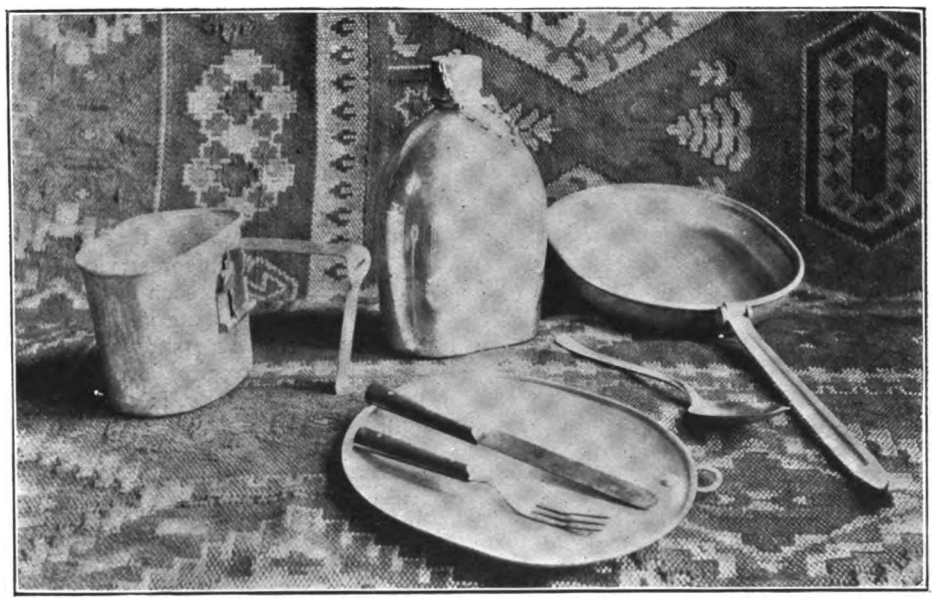

FIG. 2. THE LATEST U. S. ARMY MESS KIT OF ALUMINUM (OPENED FOR USE)
The meat can combines frying-pan and baker; deep bottom also serves as soup-plate and the lid as serving-plate.

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is the first consideration. One does not wish to carry heavy stove utensils nor are such needed. They must be strong enough, however, for hard service. In the second place compactness is a desideratum, for we must reduce bulk. The common utensils of the shop will not nest well, for they are all spouts, bail ears, handles, and cover-knobs. A large party requiring large-size utensils for cooking and a correspondingly greater number of serving receptacles can reduce the bulk by choosing such articles as nest into one another. Even in making up a light-weight mess kit the nesting idea should be carried out, but never at the cost of utility.

The component parts of any outfit will vary according to the condition or temperament of the user and the nature and locality of his experience. He has to choose from a multitudinous and confusing array of impedimenta offered by well-meaning advisers and alluring advertisements.

Of materials tin and iron are the cheapest, and they may be light enough. Here their merit ends. Iron will rust and neither iron nor tin will stand rough handling. Utensils of such material are hard to clean when greasy and if the joints are soldered one is kept in mortal fear of their early destruction. The so-called armor-steel, which is strong, stamped steel with heavy tinning, is quite good if one can get nothing better.

Enamel-ware is the easiest to keep clean, and its poor heat-conducting properties make it for some things preferable to the lighter aluminum articles. Its fault lies in the tendency to chip and flake under rough handling or in cold weather. This latter fault can be remedied to some extent by gradual warming of the article before exposing to fierce heat. Enamel-ware is not much heavier than other ware that is sufficiently strong for outdoor service.

FIG. 3. THE U. S. ARMY MESS KIT READY TO PACK

Aluminum alloy is a boon to the camper, it being the ideal material for certain outdoor utensils. It stands up in all sorts of climate—tropical, frigid north, in use on horseback trips, in canoe work, sledging, or on the hike. It is much the lightest material we have. Any sporting goods dealer can supply you. The unalloyed aluminum is too soft and easily bends out of shape with hard usage and dry heat, hence a stiffener is added, yet without appreciable change of weight.

Aluminum alloy is a quick heat-conductor, hence the cup had better be of

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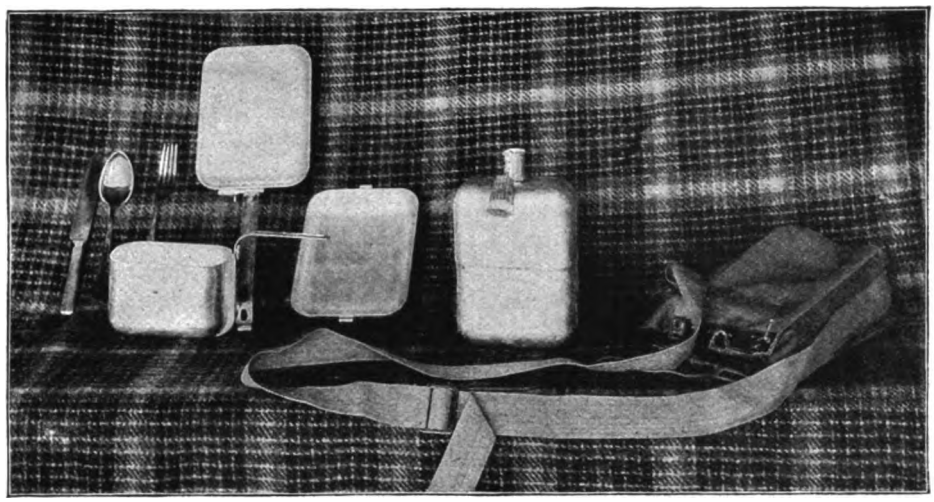


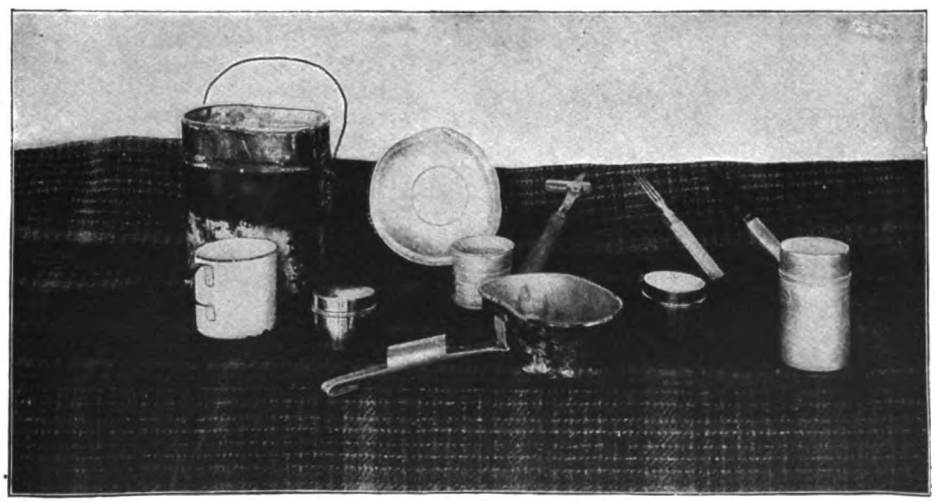
Courtesy Scribner's Magazine

FIG. 4. THE PRESTON MESS KIT

Unusually light and compact but too expensive for many for ordinary use.

some other material, such as enamelware, so as to save the lips from blistering. Also under the application of dry heat to an aluminum fry-pan the food sticks and burns, so the fry-pan is preferably of light stamped steel. However, where lack of weight is the great desideratum all parts of the cooking kit should be of aluminum alloy.

The ideal light-weight cooking kit combines the fewest utensils with which one person can prepare his own meals from the raw materials. It must nest compactly, have as few component parts as possible, be comfortably carried on the person en route, and contain space for a lunch or emergency ration and provision for carrying water. To meet these demands one may well include the following articles: a frying-pan (possibly rigged up as a baker also), a stew kettle, a cup, a light fork, spoon, and knife, and a canteen. Most of the so-called light-weight individual outfits center around the above



Courtesy Scribner's Magazine

FIG. 5. THE GERMAN ARMY MESS KIT

Made of aluminum and takes up about as much room as a high hat.

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as the essentials with variations in shape to best suit the particular outfit for easy nesting.

The preparation of food by frying-pan is not the best thing for the stomach, for the average bit of fried stuff is enveloped in a tough, greasy coating. However, most cooks use this method to some extent, so provision for frying must be made. The frying-pan is preferably made of steel, and in use is to be rested on a bed of coals raked to one side. If one prefers to utilize the big open fire the fry-pan handle should have a square socket into which one can fit a stick to extend the handle, the same to be newly fashioned at each camp. For the lightest kits use a small No. 0 pan with socket.

The camper who is choosing his light individual mess kit has the privilege of gathering together those utensils easily procurable at any store or of getting through the regular sporting goods dealers some specially made kit whose greatest recommendation is compactness with lightness and utility. The most commonly used outfit is one as mentioned—Fig. 1—consisting of frying-pan, kettle, cup, knife, fork, and spoon, with perhaps a canteen. The first three articles represent the essential components of an ideal individual mess kit and provision for these in some shape or form is made in most every mess kit combination you will come across.

Fig. 1 shows the outfit I have used for years, got together in the first place because the parts were easy to get hold of and then they were retained because they did the work expected of them—they withstood the "acid-test." The large tin cup, Army pattern, I carried at my belt where it is easy to reach and thus escapes the trouble to nest. In it I steeped tea, thus doing away with a special teapot. The kettle of tin was used for boiling water, making stews, etc. Its

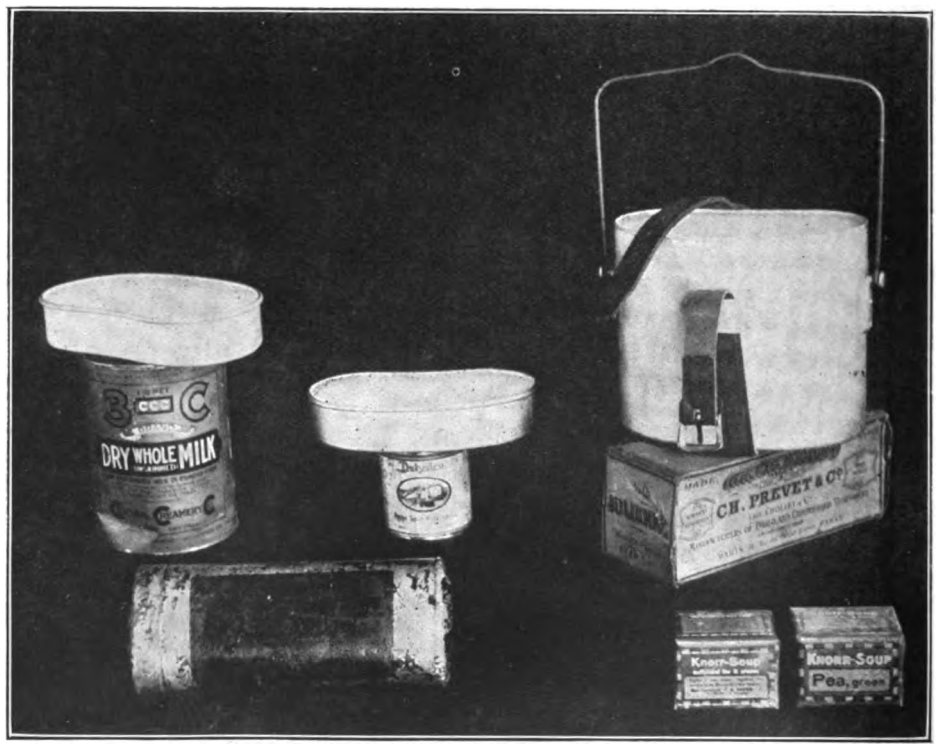

FIG. 6. THE JAPANESE ARMY MESS KIT (ALSO SHOWS PACKAGES OF THE U. S. ARMY EMERGENCY RATION AT LOWER LEFT CORNER AND PACKAGES OF CONCENTRATED FOODS)

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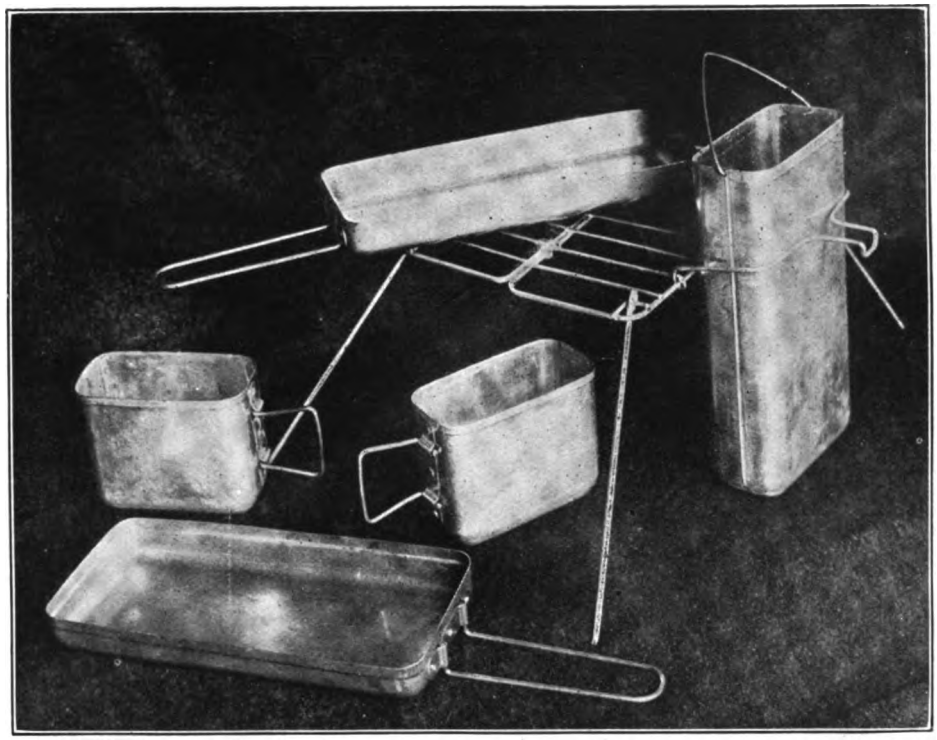

FIG. 7. THE STOPPLE KOOK KIT
Something new which has found favor because of its lightness.

wire bail I luckily lost, and therewith attached a chain bail, which "stays put" when suspending the pot over the fire and is not cumbersome when packing away. I would recommend the pot and cup to be of aluminum.

The fry-pan is a small No. 0 size with socket for wooden stick extension. It is covered with a tight-fitting lid and thus does duty as a baker. By heaping coals upon it one gets the envelope of hot air. A large aluminum alloy tablespoon, a small steel fork, and the sheath or pocket-knife or flat stick which displaces the table-knife completes the kit. On certain trips where water is scarce I add a second-hand felt-covered Army canteen.

In regard to inspirators, broilers, fire-irons, and other clap-traps, though seemingly insignificant, they furnish more details to look after, and as a rule they do not possess sufficient advantage to pay for the care and labor of transporting on a light trip.

Canteens are nearly always a necessity in mountainous regions where your work carries you on the ridges high above the valleys where the streams are. In the desert a special water supply must be planned for. In ordinary hunting or tramping trips the smaller Army canteen supplies the more urgent wants. Where the water supply is contaminated it is necessary to boil and filter the water for drinking. This can be done at meal-times and then cooled and carried in the canteen for use on the march. The purpose of the felt covering of the canteen is to keep the contents cool by the evaporation from the wetted felt.

The U. S. Army mess kit may be taken as a sample of an excellent specially-made kit. (Figs. 2 and 3.) It is composed of the so-called meat-can, a quart cup, canteen, and knife, fork, and spoon. The meat can is an ingenious contrivance combining a fry-pan and a baker for the preparation of meals, after which the deep bottom does duty as a soup-plate and the lid as a serving-plate.

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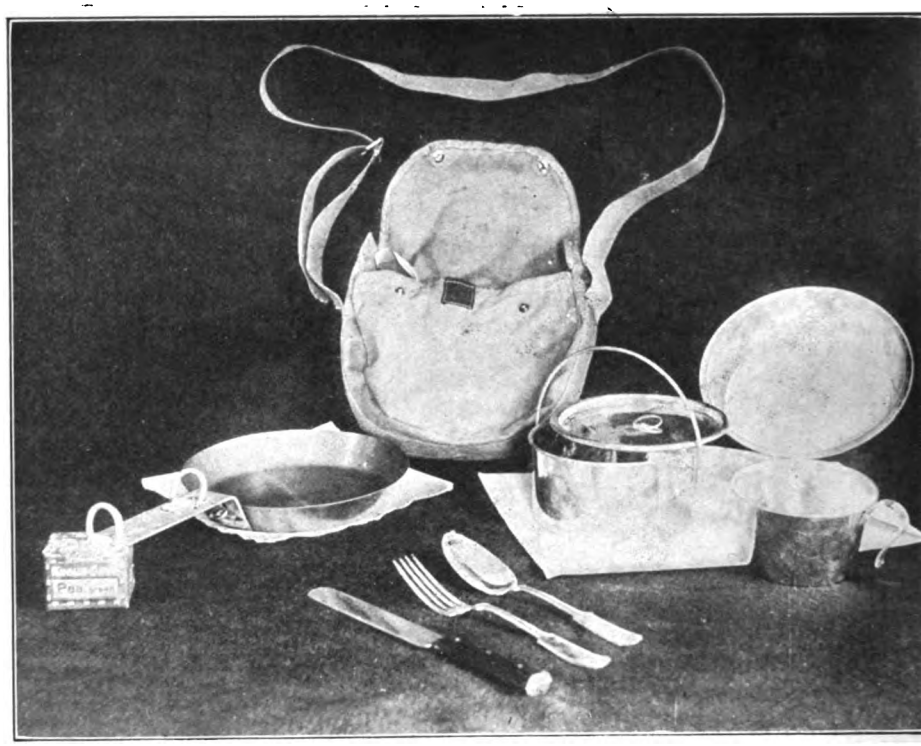

FIG. 8. THE BOY SCOUTS MESS KIT, WITH CARRYING CASE
Nests comfortably and can be carried in a neat canvas bag.

When the lid is locked in place over the pan by the hinged handle it becomes a roomy receptacle for lunch-carrying on the march. The metal ring on the one end allows its attachment to the soldier's belt, or the whole thing can be stored in the knapsack. This style has been used for years in the Army—a fact attesting to its success. It was formerly made of tin, but is now made of stamped aluminum alloy and is very light. I look upon it as an ideal mess-kit combination.

The large, heavy tin cup is now replaced by a specially-made aluminum cup which can be used as a small boiler for water or food heating. The new canteen is a clever affair, made out of block aluminum alloy, having a screw-cap, and resembles a large flask. It sets down into the cup, and the handle of the latter fits around the cup-bottom out of the way. The outfit is not generally procurable outside of Army circles. The new meat-can is made at the Rock Island Arsenal (Illinois), although the old tin kind can be secured from merchants of second-hand Army goods in the different large cities. The new cup and canteen are made under contract at Manitowoc, Wisconsin, by the Aluminum Goods Manufacturing Company.

Another efficient mess kit is the invention of Capt. Guy H. Preston, 13th Cavalry, U. S. Army. (Fig. 4.) It consists of a canteen, two fry-pans, a cup (answering as well for coffee-pot), a plate of aluminum, and knife, fork, and spoon. The plate locks over the fry-pan and makes a good baker. The canteen has a removable felt jacket for keeping the water cool, and all the outfit goes into a canvas case with shoulder-straps, size 9½x6x4 inches. It weighs 2½ pounds.

One can get the Preston Kit, with a one-half size canteen, which allows room for food for one day's use. We have seen no outfit so light and compact nor one taking up so little room as the Preston. It is excellent for individual ser-

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vice afield, and is highly recommended by the U. S. Army for foreign service, but it probably will not be generally adopted by members of the outdoor craft because of its prohibitive price.

The German Army Cook Kit—Fig. 5—is of aluminum, and takes up about as much room as a high hat. It is a combined fry-pan and coffee-pot. This outfit has not been used by the writer, yet it is mentioned here for comparison.

The Japanese have borrowed the style from the German kit, but have made one much smaller. It is of aluminum, is kidney-shaped, size 3¾x6½x5½ inches, weight 16 ounces. (Fig. 6.) Its component parts are an inset tray which can be used as a fry-pan, a bucket, and a cup cover. The parts are made of stamped metal with no joints nor soldered parts. It is fastened by a strap and buckle. This is a part of the equipment of every Japanese soldier, and can be secured in this country from sporting goods dealers.

A recently perfected outfit offered to sportsmen in this country is called the Stopple Kook Kit, which has found a welcome among followers of camp-life. (Fig. 7.) It consists of two pint cups, a one-quart pail, two 9x4 frying-pans, one 8x7 grate with 7½-inch legs. The fry-pan can be made up as a bake-oven, and all the utensils have detachable handles of wire. Its weight is 2¼ pounds. Size of the nested pieces, 9x4x2. The fry-pan is of steel, while the other items are of seamed tinware. This is a very efficient light-weight kit.

The so-called Boy Scout or Hiker's Mess Kit—Fig. 8—furnishes the commonly-used utensils for individual use, yet ingeniously contrived to nest compactly and be carried in a neat canvas bag. It is composed of a Miller fry-pan (which has instead of a socket-handle one with two rings to hold the extension-stick, and folding to the bottom of the pan when not in use), a tin kettle, with lid, a deep mixing-pan, a cup with its

FIG. 9. COMPARATIVE SIZES OF THE BOY SCOUT, THE JAPANESE, THE U. S. ARMY AND STOPPLE KOOK KIT

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handle open at the bottom, a knife, fork, and spoon. In nesting the mixing-pan sets into the fry-pan, the kettle into this, the cup in the kettle, while the knife, fork, and spoon are placed in a special pocket in the carrying-sack.

As a rule one will on a light trip carry no folding grate or fire-irons as supports for utensils; rocks, logs, or earthen trenches will take their places, and one does not have to tote them around.

In choosing your light-weight mess kit, take only those component parts that you really need, and have these as strong, light, and compact as is possible.

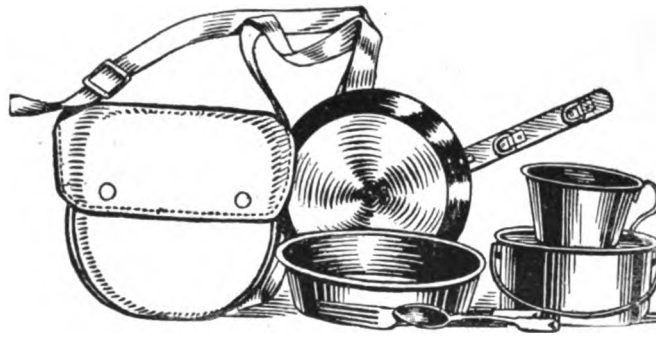

FIG. 10. THE HIKER'S COOKING OUTFIT

In January OUTING will publish its annual Football Roll of Honor and Review of the Season. The Roll of Honor is made up from the opinions of all the prominent coaches of the country.

TO HORACE KEPHART

By THE CAMP COOK

HIGH Sachem of the Culinary Clan—
Great lightener of the pack and grub of man—
Thanks are due, and words of humble praise,
For eased digestion and for lengthened days
From us, who run the trail and read your book
And, reading, cannot help but learn to cook.
You, who have written down the rules of grub
In language lucid to the mere male dub,
And rendered into human formulas
The charms which bid the "spider" sheathe its claws—
Accept our thanks, for no mere gift of pelf,
But for the priceless boon of life itself.

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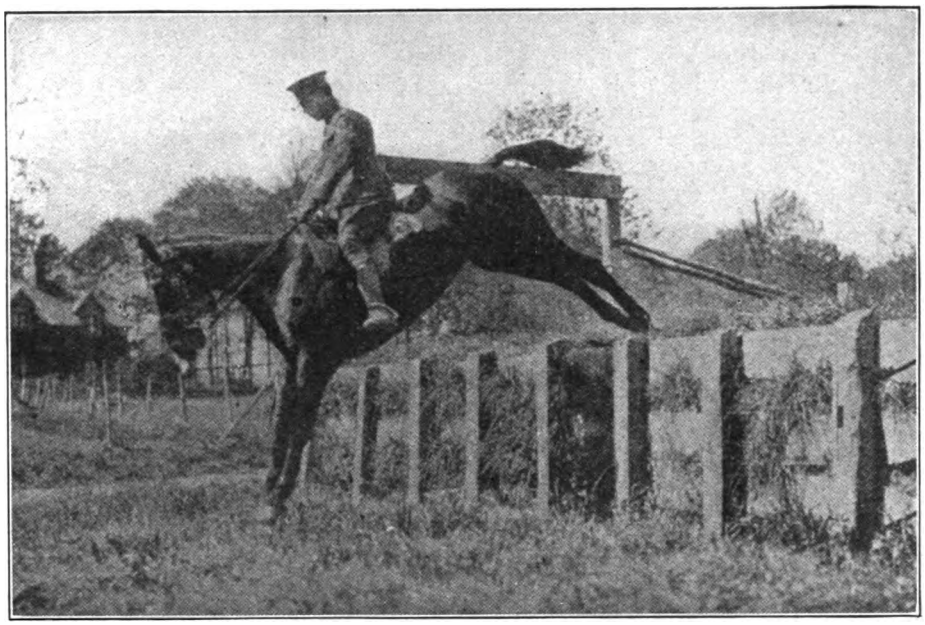

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GOOD POSITION OF THE RIDER IN NO WAY EXAGGERATED. THE POSITION OF THE WEIGHT APPEARS TO BE CONSTANT, WHICH MUST HELP THE HORSE

HOW TO TEACH A HORSE TO JUMP

ILLUSTRATED WITH PHOTOGRAPHS

Points in Schooling and Handling That Have Been Picked Up From the Best English and Continental Practice

TO a man who has the love of horses in his blood, there is nothing quite so fascinating as the teaching of a youngster in all the ways that you want that youngster to go. A horse is a creature of habit and frequently a slave to fear. The thing that he has well learned he will do to the heart's desire, so long as lack of confidence in himself or his rider or driver does not intervene to break up his sure reliance on his established habit.

There lies the secret of the charm of horse-training; so much raw material, so much hot young blood, high-strung nerves, and steel muscles, to start with.

The right method rightly applied means a splendid equine machine that will respond to every command of its master up to the limit of strength and speed. Fail in any important part of method or application, and your machine breaks down completely or performs but imperfectly.

One of the most difficult arts in the whole round of horse-training is the schooling of jumpers. On this side of the water we have done something, but in reality we are still for the most part only learning the alphabet. So much of our hunting is of the rough-and-ready sort—a hurried scramble to get in somewhere near the leaders—that we have paid little attention to the training of

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the horses that must accomplish that difficult feat for us. There are notable exceptions, of course, but the rule holds. It is in England and on the Continent that the schooling of jumpers has been carried to the highest point. In the French cavalry school at Saumur, the Italian at Pinerolo, and the Russian at St. Petersburg, the mounts are put through a course of training that combines infinite patience with forward-looking intelligence. The care with which the work is done is shown by a report from an English cavalryman who spent some time observing the methods at Pinerolo. He said:

"It is impossible to lay down any rule about the rate of progression; at Pinerolo it seems extraordinarily slow, but the result is that all horses jump exceptionally well. Start with a bar on the ground, go over this at all paces until the horse has absolute confidence, and then raise the bar a notch at a time. For the first six weeks at Pinerolo the bar was never raised more than one foot from the ground. The Italian motto is. 'Patience and progression.' The final result is that no horse ever refuses or rushes."

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A FINE, BOLD FENCER. NOTE THE PROPULSION THAT HAS BEEN GIVEN BY THE HIND LIMBS AND THE EXTENSION OF THE HORSE'S HEAD AND NECK. THE RIDER'S WEIGHT IS PRACTICALLY OVER THE HORSE'S CENTER OF GRAVITY. THE RIDER IS IN A POSITION TO LEAN HIS WEIGHT BACK OR REMAIN IN THE SAME POSITION AS CIRCUMSTANCES REQUIRE

In England the grand end and aim of the schooling of jumpers is the hunting

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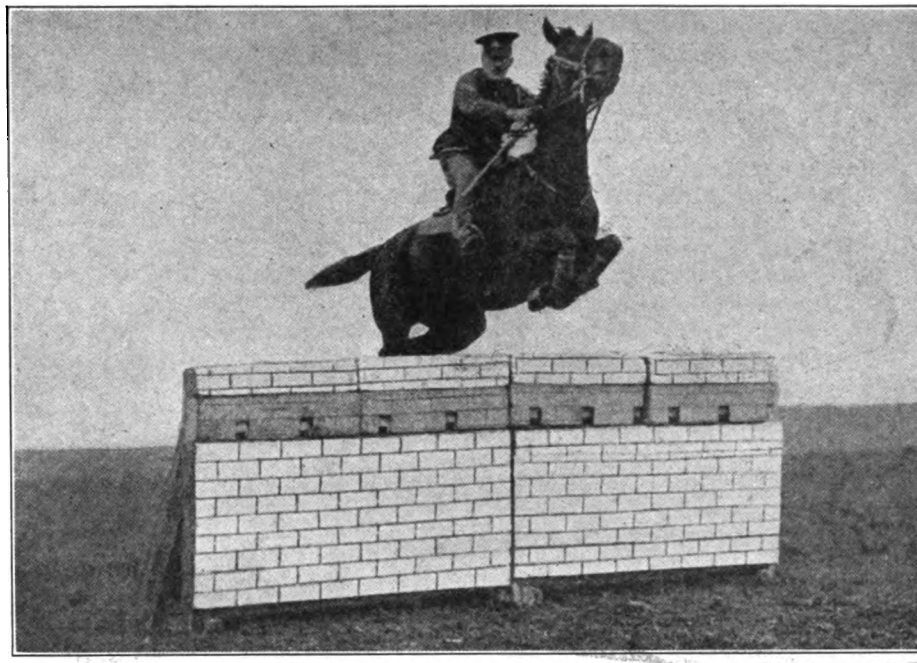

SHOWING THE NECESSITY FOR A FREE HEAD WHEN THE HORSE IS ACTUALLY JUMPING. THE HORSE'S BALANCE IS WRONG AS THE WEIGHT IS NOT BROUGHT SUFFICIENTLY FAR FORWARD, CAUSING AN OBVIOUS EFFORT ON THE PART OF THE HORSE. IF THE HEAD WAS LOWERED HE COULD MORE EASILY RAISE HIS HIND QUARTERS AND THEN EXTEND HIS FORE LIMBS WHEN LANDING

THE RIDER'S SEAT IS EXAGGERATED IN THE ENDEAVOR TO TEACH THE HORSE TO GET HIS WEIGHT FORWARD

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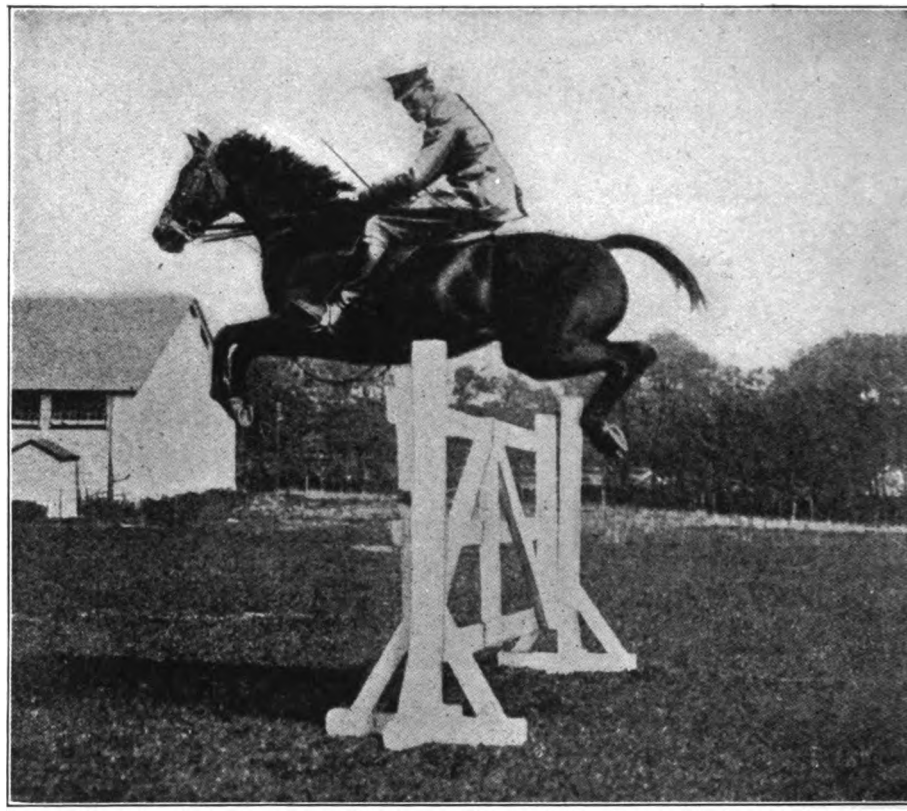

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HORSES TRAINED AT GATES WITHOUT WINGS CAN BE RELIED UPON TO JUMP EXACTLY WHERE THE RIDER PUTS THEM AT THE FENCE

field. Even the cavalrymen have this objective in view, for there are few hunts that do not number officers among their most daring and successful members. Therefore, the lessons of the Continent and of England have a peculiar value for horsemen in this country where the hunting field, the steeplechase, and the show ring offer continually growing opportunities for first-rate performance. A book written recently by Lieut. Geoffrey Brooke, well known to frequenters of the annual Horse Show at Madison Square Garden, gives an admirable summing up of the best lessons across the sea. The title, "Training Young Horses to Jump,"* is sufficiently descriptive of the scope of the work. The statements which follow are, in the main, those of Lieutenant Brooke.

The first step is to select your horse. Naturally he must possess the points of a jumper. No one would select a cobby animal, or one abnormally heavy in the forequarters. Good hocks are essential for the drive that must come at the take-off. Sound limbs and wind are presupposed, as also intelligence and spirit. Other things being equal, a horse that "looks good" is preferable. If you don't know what this means, no one can tell you, certainly not in a book or a magazine article. Be sure that he has a free, smooth gallop, low and with a good reach. A horse without the ability to reach out to a line even with the point of his nose is probably poor material for the jumps, as also a horse with a tendency to throw his weight heavily forward when galloping on the flat.

Similarly a horse that throws his weight too far back habitually is pretty

*Published by E. P. Dutton & Co., New York.

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near hopeless material, as the rider will find when he lands his hind feet heavily in a ditch on the far side of a stiff jump that another horse would have cleared with room to spare.

Balance in a horse means in a word the ability to throw his weight forward or back in such a way as to preserve in the highest possible degree the impetus of his pace and jump. Work at all paces up and down hill and jumping under the same conditions will help materially in developing the sense of balance which must become instantaneous and instinctive. If the reader must secure it himself at each jump he will soon find cross-country riding a wearisome task.

The properly-schooled hunter is started with very easy tasks. The best foreign practice is to begin with leading, the work being done in a circle. The first obstacles are low, little more than a bar on the ground. Gradually this is increased, the horse being brought up to it from either direction and at increasing speed to accustom him to taking off from whichever foot he happens to reach at the proper spot on the canter.

Over there they prefer to teach without wings. The best cavalry horses of the Continent will jump almost any kind of obstacle, even a chair or a table. Readers of the foreign illustrated papers must be familiar with pictures of horses clearing a table at which two men are

By permission of Capt. Paul Rodzanko, Chevaliers Gardes, Russia

THIS PICTURE SHOWS THE EXTENSION OF THE HEAD IN CONJUNCTION WITH THE FORE LEGS. A YOUNG HORSE WITH A LIGHT MOUTH WILL SOON LEARN TO JUMP A WIDE PLACE WITH CONFIDENCE IF HE KNOWS THAT HE IS GOING TO HAVE FREEDOM OF HIS HEAD

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seated, the horse passing over between the men without touching any of the glasses or decanters on the table. Such a feat would be a practical impossibility with a horse schooled with the aid of wings at the jumps.

Another practice over there is to drill the young jumpers in a circular or ovoid runway, at first without jumps, and then with obstacles gradually increasing in height. The positions of the jumps are changed frequently to develop in the pupil the power of taking his jumps whenever he comes to them, however unexpected. The first jumping is done at a walk and the pace is quickened very gradually.

As the jumps are increased in height the horseman begins to figure in the training from the horse's back instead of from the end of the rein. Here his first problem, and this is a good point for the young rider as well as the young horse to keep in mind, is to bring the horse to the exact point of the jump with just the right speed and impetus. In other words, he must be up on the bit at the takeoff without yielding to the temptation to rush the jump which every high-spirited young horse is likely to feel. In most cases a firm pressure of the rider's legs will accomplish this; a further advantage of this method is that it will encourage the horse to bring his hind legs well under him, as he must for the quick drive that will carry him over. A plugger can usually be encouraged to his jumps and with growing confidence will come an increasing habit of speed and willingness to come up quickly.

By permission of Capt. Paul Rodzanko, Chevaliers Gardes, Russia

THIS PICTURE SHOWS THE HORSE IN THE ACT OF PROPELLING THE BODY FROM THE GROUND. THE EFFORT IS BORNE FROM THE LOINS DOWNWARDS. NOTICE THE STRAIGHTENING OF THE HOCK AND PASTERNS AND THE FINAL PROPULSION GIVEN BY THE TOES. HERE AGAIN THE HORSE IS ASSISTED BY THE RIDER'S WEIGHT BEING BROUGHT FORWARD

The rusher is another problem. He is usually a nervous animal and nothing but patience and careful schooling over easy jumps at slow speed will bring him out of his habit. The bit may have

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something to do with it, but a bit that will break his jaw will only hold him in for that particular time. The problem will have to be faced all over again on each succeeding jump. The only solution is to establish the horse's confidence in his rider and in his own ability to negotiate the jumps, and this takes time and patience.

Whether the horse rushes or slows at his jumps, it is always necessary to be sure that he has his hocks well under him at the takeoff or the attempt may result in a way that is likely to be disconcerting to both horse and rider. With a rusher this can often be accomplished by reining back—not too hard—at the moment of the jump, or by easy practice in jumping down hill.

The position of the rider is highly important, particularly with a "green" horse, and at stiff jumps with any kind of a horse. The best method is at variance with both the exaggerated forward seat often seen in the ring at Madison Square Garden and with the strong lean backward often taken by professional steeplechasers. The former is the result of the rider's desire to get his horse sharply up to clear the barrier with his hind feet. It is effective enough in the ring where the landing presents no difficulties, but in the hunting field may easily result in a bad spill on the far side. In the case of the professional steeplechaser where the horses know nothing except to jump the rider's chief concern is to stick on over the bad ones, although even here with proper length of stirrups the rider who throws his weight properly has the best chance of landing his mount in front at the finish.

The correct seat, as it is found in the English hunting field, is to come up to the jump leaning slightly forward in the natural position at the gallop. The weight of the rider is carried mainly on the thighs and knees with practically none at all on the back of the saddle. This leaves the rider in complete control of his seat with the greatest possible ability to shift it as necessary during the jump or on landing. The whole object is, of course, to preserve to the highest possible degree the original impetus of the jump. At the moment of landing, give the horse rein that he may have all the opportunity in the world to extend himself. This will save many a fall or broken knees in a ditch or against a bad bank.

The rider's seat, particularly with reference to the position of his legs, is all-important. It is the legs that will govern in large measure the distribution of his weight and that this may be best accomplished the lower part should be free to drive the horse if necessary. On this point Lieutenant Brooke's statements are enlightening. He says:

"If the lower part of the leg is stiff it is lost as a means of propulsion to a young horse.

"If the leg is kept forward and stiff, there are several disadvantages, especially if the rider is a long-legged man. Firstly, on landing the greater part of the rider's weight is borne on the stirrup, which is forward of the center of gravity, and consequently comes too much on the horse's forehand landing. Secondly, if the horse makes a bad mistake the rider may be thrown violently forward and, the pivot from the stirrup being longer than from the knee, the violence with which the rider's body is thrown forward is increased (with the leg stuck out straight) and he has less chance of recovery. In the case of a short-legged jockey these points are of small account. Thirdly, it is impossible for the rider to bring his weight forward when required if the lower part of the leg is kept forward and the knee stiff."

No book or magazine can give all the instruction necessary to school a jumper or to make a rider, but Lieutenant Brooke has stated the fundamentals admirably. Follow these instructions, keep your hands low and your heart high, and you cannot fail to improve both in knowledge of the horse and of the difficult sport of cross-country riding.

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THE RIGHT GLASSES FOR OUT-DOOR EYES

By EDWARD CHARLES

Not Green or Smoked or Amber, but a Combination of Green and Yellow the Best

ONCE upon a time an old sergeant shooting on our club range made a mistake and got two bullets in front of a charge designed for one. The rifle resigned then and there. After the fuss was over and the various parts had finally reached the ground once more, we pulled out a few slivers of brass cartridge from his face, and the old soldier was as good as ever. The lenses of his glasses had been liberally besprinkled with the particles of brass that blew from the exploded breech, but luckily the lenses saved his eyes.

Not long ago a well-known rifle-shot lost the sight of one eye because of a miserable, tiny bit of copper that flew from the breech of a .22 calibre rifle. He did not wear glasses. Nearly any old shot can tell you of having burnt powder-grains or other particles fly back and strike him in the face. This is one good reason for wearing shooting-glasses when using a firearm of any sort.

On the brighter side is the great help afforded by glass of the proper color in defining one's sights, or picking the blue-rock out of the sky, or spotting the hurrying patch of black specks that may mean doings over your decoys a moment or so later. There is practically no branch of the shooting game in which shooting glasses will not add to the pleasure of the participant and to the scores he puts up.

In rifle shooting men wear corrected glasses, when they do not at all need them in ordinary pursuits. The captains of the service teams that are to compete in the National Rifle Matches have their entire teams examined by expert oculists at the start of the long training grind, and the slightest defect is corrected, defects, too, that would not justify an oculist ordinarily in prescribing glasses.

A shooting glass should be large, both to keep out extraneous rays of light and to afford full protection to the eyes in case of trouble. It should be toric (concave toward the eye), of most modern grinding, in order that the eye, turning as it will, may always look out through the lens at right angles, and not obliquely as with a piece of plane glass.

The color of the glass used is more important than the shape of the lens. A large number of unfortunately misinformed people insist upon using smoked glasses as a help to their vision. The next worst thing is the blue shade affected by others.

Optically, a ray of white light, such as sunshine, consists of the seven primary colors. One end of the spectrum, consisting of the green and yellow rays, is the end from which the eye forms the image. The other end, the blue, purple, violet, and then down to those invisible to the eye, is the end from which a photograph is formed—the actinic or chemically active rays. So essentially different are the two ends that a camera focused on a distant star may be in sharp focus so far as the visual or green-yellow rays are concerned, but be an inch or more out of focus for the actinic or photographically useful rays.

The chemically active, or purple and blue rays are of absolutely no assistance in forming the image in the eye, but on the other hand are very irritating.

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Therefore oculists have evolved various colored glasses that will strain out a large proportion of the irritating purple and blue rays, but allow all of the other end to pass through. Therefore, as glass of a green tinge will allow green rays to pass, but will hold up those at the other end of the spectrum, the optician has taken advantage of this dislike of one part of the family for the other and uses glasses varying from amber or yellow, down to those of a green shade, to stop the purple and blue rays from reaching the eye.

To one not used to such glasses the enormous change produced by putting on a pair is surprising. If one is looking out over bright water, or some white surface, such as snow, reflecting an overplus of light, rich in actinic power, the amber or greenish-yellow glasses produce the most amazing relaxation of the strained eyes — so far as feeling goes. The squint disappears, and the eyes fairly rejoice at the cessation of the bombardment of the vexing rays to which they had been subjected.

Smoked glasses, by which many people fool themselves most beautifully, produce merely the same effect as a dirty window. They diminish the volume of light passing to the eye, but pass just as cheerfully the evil-doing rays as they do any others. While a relief in glaring light, they decrease the power to define in just the proportion that they afford relief, and are but a mild form of closing the eyes entirely.

Blue glasses exist without an excuse. They reverse what they should do as accurately as would a hot stove in the case of a man already overheated. They screen out the useful rays of light and pass the harmful.

For years amber was the accepted color, but it is at present out of date. Recent experiments along the work of Dr. Fieuzal, a noted scientist years ago, have demonstrated that the most useful glass of all to the sportsman and frequenter of the outdoors is a peculiar combination of green and yellow. It was suggested to the maker, a man specializing in outdoor equipment optically, by the ray-filters used in photography. Examination of an ordinary ray filter proved it to be merely two ordinary lenses, cemented together with a pigment between the two. A jar of any sort developed white flecks in the glass, due to displacement of the pigment.

The optician, therefore, began to scour Europe for a shade of glass similar to the pigment in the glass itself. He finally found it in France. At Camp Perry the glass made a sensation with the riflemen examining it, but unhappily it was impossible to get more than enough lenses for a few spectacles.

In the hands of the writer, who has used the new shade for six months, the color has a strange illuminating effect, its virtue being as marked on a dark day in target shooting as on the bright days, when colored glasses are normally used for toning down the superabundant light. Without question this and similar shades that will probably follow are going to displace the old amber.

Careful Fitting for Prone Shooting

For rifle shooting prone, careful fitting of the spectacles is called for. The line of aim in the prone position rarely passes out through the center of the lens, where the optical center is usually placed, but usually up at the upper left-hand corner, known to the rifleman as eleven o'clock. The skilful optician, knowing this, grinds the lens to correspond. The service teams—meaning the score of splendid marksmen who represent the U. S. Cavalry, U. S. Infantry, Navy, and Marine Corps—in the National Matches use either the old amber, or the new greenish-yellow shade, with each shooting lens made up to best take care of the peculiar position of the different men.

There is no reason why one's prescription should not be ground in his outing glass. Also the additional cost of the colored lens is but little—very little in comparison with the comfort derived therefrom. It is far better in such cases to seek the men who specialize in outing glasses than to entrust the job to the local optician, who knows of new glasses only through his stock-house, and whose stock-house may not be in position to furnish the newest glass.

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The simplest test for glasses of various sorts, traveling under the guise of outing glasses, is to gaze through them with a spectroscope. The optician usually has one, a little tube which shows to the one gazing through the solar spectrum from the violet around to the green. Hold this to the sky, and then, placing the glasses in front of it, see how much of the harmful violet rays are cut out. Some of the much-vaunted ones with jaw-breaking Greek names have absolutely no effect, and even confidence in the word of your optician and the power of mind over matter won't keep your eyes from weeping bitter tears when the light becomes too strenuous from glistening water or bright snow.

The ideal outing glass should have a gold-filled frame, and should have an adjustable nose piece or bridge for the various sorts of faces which it is to adorn. The glass is heavier than the ordinary spectacles; it must be if it is to afford ample protection, and it must fit your face.

Glasses of this sort are particularly useful to the duck hunter, who sits searching the sky for the specks that mean birds, with perhaps the light reflecting from the dancing wavelets before his blind. The wise trap man has a pair in his kit bag to use when the light is hard, or a wind is blowing the burning powder back toward his eyes. Once a follower of the traps has tried a pair of real outing glasses of the modern color, he rarely shoots a string without them, regardless of the particular light conditions.

Only when one is perspiring freely are the glasses a nuisance. Then they must be carefully set to keep from turning into perspiration conductors from the brows. It is surprising what a damp appearance the landscape has when two or three trickles of moisture are coursing over the lens before each eye. At Camp Perry the first part of the National Matches came off in very hot weather, and sweat bands for the forehead were very stylish. Unless they were worn, however, the glasses would fog up from the moisture.

My experience has included seances with about every form of outing glass now made, from the rimless, hinged pattern, consisting of two lenses, with a hinge between, and a bow at each end, down to the ordinary rim, tortoise shell, wise-owl glass now in vogue.

I have come to the firm conclusion that the rimless glass, particularly of the hinged variety, is not good medicine. The form is a comfortable one, but it is too fragile and too heavy.

The best form is the rim pattern, gold filled, with adjustable nose-piece. The bows to be preferably of the ordinary gold-filled wire, covered with rubber tubing. The spring, flexible temples do not seem to have sufficient rigidity for the heavy outing glass, satisfactory as it may be for the ordinary street affair.

The man who gives the greenish yellow or amber glass a trial will never be without it on his trips, while if he has had even the slight experience of the writer with firearms he will not tempt fate by using them without some protection for the eyes against accidents. I have seen but one lens broken in my shooting experience from the gun itself; this when a man who shot with his glasses fairly against the bolt of the Springfield had his right lens broken by the cocking-piece when a primer burst and drove back the said cocking-piece to full cock. This was, of course, unpleasant, but likely to happen once in ten thousand times, under the same conditions.

On the other hand, I have seen quarts of the tiny .22-caliber cartridges spit fire back along the bolt of the rifle or along the side of the pistol, endangering the eyesight every time it happened.

The .22 is a particularly dangerous little fice because of the large amount of fulminate around the head and the likelihood of the cartridge bursting around the extractor slot. With the dozens of faulty breech-closing devices put out for the .22 it behooves the user thereof to wear glasses large enough to protect his eyes, merely as a cheap form of insurance against a risk that emphatically does exist.

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IN THE HAUNTS OF THE VAAL RHEBOK

By H. A. BRYDEN

What the Hunter Must Do to Bag the Gray Antelope of South Africa

THE vaal or gray rhebok is by no means one of the largest or most important of the numerous antelopes of South Africa. Neither is it well known to the average Cape traveler or to the colonial townsman, whose chief opportunities of shooting are gained probably with the well-known springbok or with small and abundant antelopes such as duyker and steinbok. The vaal rhebok is, in fact, essentially a mountain dweller, inhabiting wild and remote ranges, where, save to the more persevering and determined sportsman, or to the pastoral farmer, its shy and retiring presence is but little dreamed of.

Yet this antelope affords some of the finest hill stalking to be found in any part of the world, and although its horns may as hunting trophies be considered insignificant and its flesh is of the poorest, the man who has once tasted the delights of following the vaal rhebok amid the rugged and sublime scenes in which it makes its home will return again and again to this form of sport, and will treasure in his mind many and many an incident of thrilling excitement, many a scene of almost unrivaled beauty. Excepting, perhaps, the stalking of really wild red deer among the hills, or of chamois in their Alpine fastnesses, there are few forms of mountain shooting which can be compared with the chase of vaal rhebok in South Africa.

The vaal rhebok (*Pelea capreolus*), the *Peeli* of the Bechuanas, *Pstiatla* of the Basutos, *Iliza* of the Swazis, is an antelope which in some respects stands by itself among the fauna of South Africa. It is placed by naturalists next to the reedbucks, but has few or no affinities with them either in structure or habits, except perhaps in the shape of the skull. The ram stands about thirty or thirty-one inches in height—the ewe somewhat less—and measures about five feet in length. The coat of this antelope is its most singular feature. Pale gray in color—whitish underneath—and of a soft, villous and woolly texture, resembling almost exactly the fur of a rabbit, the pelt of the vaal rhebok differs from that of any other antelope in Africa. The form is slender, the neck long and slim, the head small, the ears pointed and elongate, the tail short, broad, and furry. The legs are long, slender, and somewhat stilty, yet capable of carrying their owner at a perfectly astounding rate up the steepest and most rugged mountain slopes. The slender horns of the male are straight, sharp, and well annulated from the base to about the center. A good pair will average about seven or eight inches in length. The females are invariably hornless.

These antelopes have a pretty wide range in South Africa, being found from the south of Cape Colony to about the Tropic of Capricorn or a little beyond—Southern Matabeleland being about their farthest northward limit. They are found always among mountain country, ranging from the lower slopes to altitudes of five or six thousand feet. Preferably they inhabit hills on which plenty of grass is found mingled upon the sides with scattered bush. The flat-topped hills, so characteristic of many parts of South Africa, the summits of which abound in long grass, are favorite abiding

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places. At nightfall they usually descend to drink at some stream or natural fountain among the kloofs and ravines; after grazing about in these lower valleys, toward sun-up they begin to climb the hill again, keeping invariably an extremely sharp look out.

Few wild creatures in the world are shyer or more suspicious, or more difficult to circumvent. They run usually in troops of from six to eight or ten; sometimes as many as a dozen may be seen together. As with other kinds of game, the old males, when driven from the troop, wander about alone in melancholy solitude. Their cry of alarm or suspicion is a curious, quick, coughing snort, which, once heard, will be easily remembered. Thanks to their high and sequestered habitat, they have few natural enemies, save the leopard, which usually haunts the same mountain country, and now and again takes toll of their number. The leopard, however, preys by choice upon that other mountain antelope, the klipspringer, whose flesh is far preferable to the vaal rhebok's, or upon baboons, bushbuck, duyker, wild pig, and the flocks and herds of farmers.

During the heat of the day these antelopes rest in well-sheltered nooks among scattered boulders upon the hillside, or among the long grass on the cooler mountain top. At this time watchful and acute though they are, they can perhaps be most easily approached, and a stalk, well and successfully carried out under such conditions, is one of the most satisfactory feats that the hunter can congratulate himself upon. A pair of first-rate field-glasses is an absolute necessity for this kind of shooting, and once a troop of these shy and watchful antelopes has been located the greatest diligence, silence, and skill have to be displayed if the hunter means to creep in successfully for his shot. A falling stone, a change in the wandering airs that play upon the mountain side, and the stalker is discovered and the hard and burning labor of an hour or more has been thrown away!

The Kaffirs, who understand the habits and haunts of these animals, as of all other wild fauna, to perfection, can occasionally be utilized to conduct the sportsman to some pass or *nek*, where, in the dim, early morning, just as the sunrise begins to tint the mountain tops, a fair shot or two may be obtained as the antelopes return to the mountain sides from the valleys beneath. This, of course, necessitates being up during the previous night; or a cold couch among the grass upon the mountain itself, and long and sometimes fruitless hours of waiting in darkness or semi-darkness.

The excitement, when this mode of shooting comes off successfully, is very intense, and as the gray, ghost-like forms of the antelopes steal by in the cold dawn, often in a light, or rather lack of light, that is extremely uncertain, or perhaps dimly seen through floating mist that partially veils the hillslopes, the gunner must be cool, steady, and a quick, sure shot if he wishes to grass a good vaal rhebok ram. A form of sport sometimes adopted is driving, with the aid of dogs and natives. The animals are pushed or maneuvered through a narrow *poort* or pass, from one hill to another. In these essays far more rhebok are as a rule wounded than killed. Stalking is infinitely preferable to the true sportsman.

Where the Rhebok Roams

Perhaps the best parts of South Africa for vaal rhebok stalking at the present day are some of the mountains of the southeast regions of Cape Colony, the wild, broken hill country of the Eastern Transvaal, and some portions of the Bechuanaland Protectorate. Vaal rhebok are, however, to be found also in many other parts of the country—in Natal, Kaffraria, the Orange Free State, Zululand, Matabeleland, and elsewhere—often in fair numbers. They are not much disturbed by the Boers, who care little for their flesh, and are by no means lovers of the tough and arduous work of hill climbing.

But the most typical country for vaal rhebok stalking is to be found in the lower midland and southeastern portions of Cape Colony. I first encountered these antelopes in this region, and I can never forget the intense pleasure that I enjoyed in the wild, rough life and magnificent stalking among the splendid

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mountain interiors of that region. The south of Cape Colony is by far the most wonderful part of South Africa for mountain scenery and flowers. In these haunts, while in pursuit of game, even the sportsman usually indifferent to the charms of nature can hardly fail to be struck with the splendor of the scenery; the deep and darkling kloofs, the precipitous cliffs, the towering, bush-clad hills, the extraordinary wealth of flower life everywhere. As a rule, in Africa, thanks to the hot sun, this wealth of floral life fades rapidly; but in some of these cooler and moister mountain interiors the heaths, lilies, gladioli, irises, orchids, pelargoniums, everlastings, marigolds, and innumerable other flowers linger to a much later period than do the flowers in more exposed and sun-scorched positions.

Let me try to describe a morning stalk in this portion of Cape Colony. We quit the square, flat-topped farmhouses, perched upon the rugged hillside, before sunrise, after a very early breakfast by candlelight of coffee, good home-made bread, goat fry, and honey. It is absolutely necessary, if we wish to circumvent these antelope, to be on the hills and so above the game as they feed leisurely upward after their night in the valley. The morning air is chill as we issue forth, and, marching behind the Kaffir who is to show us the path, move steadily forward. First we descend the slope, follow the valley for a mile or more, and then, in the dim light, climb upward.

It is rough, chancy, stumbling work; shins occasionally suffer in the process, and progress is not over brilliant. Still we push doggedly on and presently attaining a flat-topped, grassy elevation, make better marching of it. We move along a kind of *nek* or saddle of the mountain, and now, after climbing a little higher, make some slight descent again. At length, after a tough scramble of four or five miles, we have reached our ground and with the growing light can begin to look about us.

Where we stand, or rather sit, upon the side of a vast, grassy hill, broken with boulders, strewn as if by the hand of giants, and patched with bush, we are now about eight hundred feet or a little less above the floors of the valleys and kloofs beneath. It is a spot excellently well chosen by our Kaffir. From the snug hiding place, amid grass and rocks, where we take shelter, we can sweep the valleys and hillside upon either hand for a good half mile, while the more precipitous mountain-side facing us lies also open as a book before our glasses. This is a very favorite feeding-ground, and the rhebok have been little disturbed of late. Now the sun begins to make his presence felt, stealing over the hilltops, gilding here and painting there in his passage, licking up the thin mist wreaths that float above us, warming the slopes upon which he falls, and creating beautiful effects upon every hand.

A Land of Life

Up here the cleanness and vigor of the atmosphere is indescribable. You feel as if you were drinking in the very life and a wonderful exhilaration steals into your frame. Even up here traces of flower life are to be seen. Lovely wax-like heaths, rose-pink, crimson, scarlet, and coral, nod here and there; in the hollow yonder sweet proteas are in flower; while from the ruggedest parts of the hillside occasionally there starts up a great aloe, thrusting boldly aloft from around gigantic boulders its blood-red flower spike. Overhead a shadow passes. We look up and a great jet-black eagle sweeps by, looking up at us boldly and inquiringly. So close he is that we can even note the brilliant yellow of his feet. That is the "Dassievanger" (rock rabbit-eater)—Verreaux's eagle—one of the noblest birds of prey in all Africa. The grand creature is taking the sunshine, and looking eagerly for a breakfast.

A harsh, grunting bark comes from the rocks far to our right. The baboons, too, are sunning themselves yonder; that, no doubt, was some "old man's" querulous complaint at the levity and ill manners of his juniors! For half an hour we crouch in our grassy forms, scouring the valley and the slopes beneath us with our glasses. Then suddenly a cluck from the tongues of our

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Kaffir startles us. He, with his naked eye and his far acuter hunter's instinct, has spotted what we, aided by our field-glasses, have passed over. Right down there beneath us, to the right hand, a little troop of gray antelope are feeding; evidently they are trending gently and obliquely uphill. It is too early to think of trying for them yet, and the ground between them and us is too open to attempt a stalk. Moreover, a stalk downhill is always a difficulty, often a sheer impossibility.

We wait patiently for events which at last shape themselves. The buck are feeding slowly up wind; in about twenty minutes they will have reached the hillside upon a level with us, about seven hundred yards distant. Ten minutes before that time one of us can begin to creep in and get his stalk. The wind is right. At present the rhebok are absolutely undisturbed and unsuspicious; yet not quite unsuspicious, for, as we scan them attentively with our glass, we note one buck—manifestly the sentinel for its six fellows—constantly pausing from its feed to look about and testing the air with its moist black muzzle for any symptom of danger.

The Ticklish Moment

At length the moment has come; one of us creeps away along the hillside, hugging any patch of covert and rock, and stealing steadily but with extremest caution forward. It is ticklish, yet wonderfully fascinating work! On and on he creeps; he has gained a hundred, two hundred, four hundred yards, and is within three hundred paces of the game. That last hundred yards or so is, of course, the most ticklish part of the business. The boulders are very scant and the patches of bush low and none too plentiful. Like a worm the gunner wriggles himself through the grass and shrubbery, hot, dishevelled, panting; the sun gets warmer and the sweat is beginning to pour from his face and chest and hands. It is agonizing, especially when, as the stalker, squinting one eye from behind the corner of a bush, discovers that restless sentinel, his head up, looking with extreme suspicion about him.

But at last, with infinite pain and labor and with an aching neck, the last hundred yards are gained. The troop has turned ever so slightly and the distance from the game is just upon two hundred yards. To get nearer is impossible. The rifle comes forward; its barrel creeps slowly through the screen of grass and bush; the muzzle goes up gently, gently, ever so little; now it is aligned upon that deadly spot just behind the shoulder of that good rhebok yonder; the old ram with the sharp, straight, glinting black horns. A long breath, one more steady press at the trigger, and the trick is done. At the rattle of the shot the ram springs in the air, staggers, and then scrambles convulsively uphill. It is the mere struggle of desperation of a dying beast. Forty yards farther and the antelope suddenly collapses; down it goes upon its side, its white belly turned toward the still concealed stalker. It will move no more!

Meanwhile the rest of the little herd, startled at the crisp report of the rifle, tear away up the mountain. Who that has only seen these gray antelopes stealing quietly up the hillside, with that quaint, stiff, rather stilty action of theirs, could imagine that they could cover the ground, and such ground, rough and precipitous as it is, at such a pace, could believe that these are the same creatures! They fly up that grassy, boulder-strewn mountain as if borne by the wind, skimming the earth in marvelous fashion. A huddle of rocks sends the troop together again, and just at that moment the stalker, who has been following them with his weapon, pulls trigger once more. A good if lucky shot at three hundred yards, and another buck falls, raked from stern to shoulder by the .450 bullet. The five remaining rhebok, yet more terror-stricken, flee onward and upward at, if possible, greater speed, and are soon far out of range, fleeting over the face of the far mountain like a wisp of gray mist.

The antelopes, ram and ewe, are picked up and the sportsmen, lighting their pipes, puff away contentedly and discuss further operations. If they are keen they will probably push on to another part of the mountain on the chance

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of bagging a klipspringer, or alighting upon another troop of vaal rhebok, or perchance of rooi rhebok. The morning is young, and sport need not be at an end. Vaal rhebok is, after all, but poor meat, and, leaving the Kaffir to fetch up another native boy with a pony wherewith to carry down the dead antelopes, the two friends trudge on over the hills for a klipspringer. Klipspringer venison is, by the way, quite among the best furnished by the smaller African antelopes, coming, in the writer's opinion, easily second to the delicious flesh of the springbok. Before high noon, a klipspringer ram is stalked and bagged, slain just as he mounted a jutting peak of rock to look round for his suspected foes —a silly habit these wonderfully active little mountaineers often exhibit—and the two men, one of them shouldering their last buck, turn homewards.

I spoke of rooi rhebok just now. The rooi (red) rhebok (*Cervicapra fulvorufula*) is a species not very closely allied to the red rhebok. It was for long a puzzle to natualists, but has been finally classed with the reedbucks—to which. indeed, it bears strong family resemblances—and is now known to European zoologists as the mountain reedbuck. In South Africa it will, without doubt, continue to bear its own colonial Dutch name of rooi rhebok.

This antelope inhabits much the same country as the vaal rhebok, but as a rule prefers the lower slopes of the hills. When pursued by sportsmen it will, however, climb readily to the higher ground, and may occasionally be seen mingling with troops of its gray relations. As soon as the danger is passed the two species separate and betake themselves to their own feeding-grounds. Rooi rhebok afford excellent sport, and the gunner in search of vaal rhebok is as likely as not to bag on the same morning a head or two of each of these antelopes, and if he has luck, a sturdy little klipspringer into the bargain. In color the rooi rhebok is of a reddish brown; it is slightly smaller than the vaal rhebok and more stoutly built.

The coat is quite unlike the fur-like texture of the gray rhebok's and is noticeable for its long, coarse hair. The white underparts are very noticeable. The horns of the rams (the females are hornless) are about seven inches in length and curve sharply forward toward the tips. The cry of this antelope is totally dissimilar from the snorting cough of the vaal rhebok, and is, in fact, extremely like that of the reedbuck, a sharp, shrill whistle.

Let us descend presently with the two gunners and see them as far as their farmhouse. At the slope of the last hill down which they stride so contentedly a covey of graywing partridge (francolin) runs before them; one after another the birds get up in alarm and swing off round the mountain shoulder on strong pinions. Here you may see that the hillside flushes a glorious pink with quantities of the splendid heaths that bloom so freely amid these lonely heights. Proteas, round which are gathered beautifully plumaged sunbirds in panoply of lovely metallic hues—violets, greens, blues, purplish browns, yellows, and reds —flower luxuriantly; and from these sweet flowers the sunbirds—sugarbirds, the colonists invariably call them—are extracting with long, brush-tipped tongues great store of the clear saccharine juices which, with various insects, form their chief food-supply.

Rockrabbits, the true conies of Scripture, are running like flies up and down that precipitous rock wall yonder, which bounds the kloof into which we plunge. Passing an angle of the valley, we wade, literally wade, waist-deep through masses of lovely pelargoniums, all wild, of course, never planted by the hand of man, which grow in a wonderful profusion in the richer soil of the valley.

How different this scene from the parched plains of the karoo, or the endless, sun-scorched, rolling grass plateaux of the high veldt still farther up-country. And yet hundreds of such kloofs and valleys lie hidden away in the lower portions of Cape Colony, unknown, undreamed of by the folk who rush to Johannesburg and Rhodesia; nay, scarce known by the bulk of the British colonists themselves. And so, after a twelve-mile tramp, hot, a little fatigued, yet thoroughly happy, we reach the farmhouse again.

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CONFESSIONS OF A MARKET SHOOTER

By EDWARD T. MARTIN

What One Man Did in the Days of Unlimited Bags and Open Sale

IN reviewing the past it seems strange that shooters of winged game did not foresee that the ceaseless slaughter they were engaged in would soon result in extermination, particularly when assisted by such allies as the plow, the ax, and the dredge. The term shooters is intended to cover those who shot for sport and pleasure, as well as those who made their living by the gun.

It never occurred to me, and I am sure it never did to any of the market shooters I knew and knew well, that in a few short years we would find our occupation gone because no game remained to shoot. It didn't seem possible the ducks could go, the pigeons go, the prairie chickens go, the snipe and plover go, yet but for stringent laws no game would now be left. I did not then believe such things could happen. I can hardly realize it now.

Then one could go almost anywhere within a night's ride of Chicago and at the proper time of year kill fifty ducks or more in a day, almost as many chickens, and, by crossing over into Michigan, see so many pigeons their numbers would darken the sun; so why should we believe there was danger of extermination?

The sportsmen, members of game protective associations, except for a very few, themselves were often as careless as the market shooter. In fact, back in the seventies, the first thing a game protective association did after organization was to plan a shooting tournament at which many thousands of pigeons were slaughtered, and sometimes, when pigeons were hard to get, quail would be caught to fill their place.

This demand from clubs increased the destruction of pigeons at the Michigan nestings of 1876 and 1878, for both years when the catch was best birds shipped dead would not pay cost of the barrels and ice used in shipping and had there not been a good demand for live, the netters must have quit and gone home. It was thoughtlessness on the part of sportsmen and market shooters alike, for it does not stand to reason either would wish the game exterminated.

There was no work harder than shooting for a living. Consider the long hours, exposure to all kinds of weather, and the pound of the gun; then when it was through with, the dealer, the middle man, made all there was in it and the man who did the work was lucky if he got clothes to wear and food for his family.

We are all creatures of circumstance. It was a doctor and his prescription that made me as much of a market shooter as I was. It came about this way. In 1868 when I was a tall, narrow-chested, stoop-shouldered young man with weak lungs and a hacking cough, a doctor prescribed plenty of fresh air and nothing but outdoor work. He said, "If you wish to live three years longer, go camping; rough it; stay outside all the time." If every prescription worked as well as that, there would be many less dead men, and fewer doctors needed to minister to the living.

Breech-loaders were just coming into use. I purchased a heavy, pin-fire 10-gauge, a thousand shells, tent and cooking utensils and on the 15th of August started a campaign against the ducks, a little lake in northern Indiana being the chosen spot.

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How the ducks must have laughed at my efforts to kill them! It was bang! bang! Hurrah, boys, here they come and there they go! Ducks everywhere. The lake full of them, the sloughs full of them, the air full of them, and the only place there were none was in my boat.

For a month I tried. At the end of that time, the thousand shells were gone, and one duck, a blue-wing teal, had been killed. Every bit of game for camp use, bar the single duck and a few blackbirds, was bought of a more successful shooter. I was game, though, and had money enough to buy another thousand shells. With these, better work was done, and one ever to be remembered day twenty-six blue bill were killed, but at a most extravagant expenditure of ammunition.

When ice and snow ended the season, the weak lungs were gone, and with them the cough, but a love of shooting was contracted which has lasted forty-five years and seems past cure. Since then it has been learn, learn all the time. At every new place there would be shooters with new ideas and my reputation as a successful shooter—which was very considerable—was due largely to absorbing information everywhere. Yet there was no money in it. With half the hard work at any regular business, ten times as much could have been made.

For instance, a three months' shoot in Iowa and Minnesota, in which 6,250 head of game were killed, netted a hundred dollars a month. Lack of ice was a great handicap there. A winter's duck shoot in the South, in which 4,550 ducks were killed, showed about $200 profit. A short trip to the Indiana swamps, in which 1,100 ducks were killed in nine days, was almost a financial failure. The best offer made for the ducks in Chicago was fifty cents a dozen, although included among them were some canvasbacks, and many red head and mallard. By repacking and shipping to Boston enough was realized to pay the expenses of the trip and about twenty dollars over.

Half a dozen times I quit "for good," sold my kit, and went to work at something legitimate. It was no use. Just as regularly as the leaves began to change color in the fall and the honk of geese high in the air was heard as they flew southward, the fever came on again, a new outfit was purchased, another campaign started, and much more game killed.

Since that first duck dodged into my stray shot and died, a careful account has been kept year by year of everything killed with a shotgun and the total is nearly a hundred and forty thousand head. Counting shells used in glass ball and clay pigeon shooting, I have fired upwards of three hundred thousand shots. Black powder was used most of the time. Figuring 256 drams to the pound and my average load over five drams—six were often used—loaded in specially made metal shells, we would have a total of six thousand pounds of powder and in the same way, allowing twelve *measured* ounce and a quarter loads of shot to the pound, twenty-five thousand pounds of shot.

Does it seem possible one man could shoot away so much ammunition? Yet I did. I have one gun that myself and friends have fired a hundred and fifty thousand times. It will kill even now, but does spit fire a little at the breech. Its companion has done half as much work and shoots as well now as the day the maker put it into my hands.

Naturally methodical and a trained accountant, it was a pleasure to watch this account of game killed and see it grow, year by year, but without ever supposing it would reach the total it has. The total of game killed from August 15, 1868, to November 1, 1908, is as follows:

Flamingo	1
Eagles	2
Woodcock	11
Pelicans	10
Owls	36
Ibis	43
Willet	49
Curlew	58
Sand Hill Crane	72
Heron	103
King Rails	249
Rice Hens (Gallinule)	242
Hawks	261
Blue Grouse	265
Partridges (Ruffed Grouse)	268
Doves	338
Geese and Brant	1,845

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Small Rails	3,110
Prairie Chickens (Pinnated Grouse) includes sharptail grouse	5,291
Quail	5,466
English Snipe	5,066
Plover	4,948
Mud Hens	7,387
Pigeons (trap shooting)	27,378
Pigeons, wild, shot and netted	3,110
Black Birds	8,117
Ducks	61,752
Rabbits	2,543
Sundries	1,607
Total	139,628

Included in "sundries" are 3 badgers, 9 skunks, 1 porcupine, 150 tree squirrels, 3 opossums, 1 raccoon, 467 muskrats, 6 mink, and a variety of small snipe and bay birds, as well as a few robins and larks, these last killed in the South, where they were considered game.

Some of the items, such as blackbirds and mud hens, are partially estimated, but probably much under, rather than over, the true account.

The flamingo and ibis were shot for specimens and sold, the first for $10 and the ibis for $5 each.

It was impossible to save a pelican. They spoiled a few hours after being shot. The finest of the ten killed, a beautiful cream-colored male, was so large a sugar barrel would hardly hold him and he would have been a prize for any collector or museum.

One of the eagles had dined royally the day he was shot. In his craw, the taxidermist who mounted him found remains of one blue bill duck, one mallard, two teal, green and blue wing, one wood duck, and parts of one or more mud hens.

He was killed, too, in a peculiar way. Some decoys had just been thrown out in a spring hole surrounded by high trees. While fixing cover for a blind some mallards came in to the decoys and were gone before a gun could be secured. An attempt was made to call them back when the eagle swooped down on the wooden ducks and was shot.

Prices received for game varied. Prairie chickens sold as low as $1.25 a dozen. Two dollars was considered a fair price, and some few towards the end brought $6.00.

Canvasback ducks sold as low as 45 *cents* a dozen, and as high as $3.00 each. The average price for mallard was $2.50 to $3.00 a dozen. Quail from $1.00 to $2.00 a dozen. Mud hens 60 cents a dozen. Blackbirds 25 cents a dozen. Rabbits about $1.25 a dozen. Geese from $3.00 to $6.00 a dozen. English snipe and Golden plover from $1.00 to $2.25 a dozen. One owl, a very rare specimen, went to a collector for $50.00, and an offer of $25.00 each was refused for a cream-colored mallard and a hybrid, half gadwall, half canvasback. A quarter part of two days was spent once in the Indian swamps chasing a white crow, but without success.

Large bags were often made. In September, 1880, 101 prairie chickens were killed in one day. In January, 1889, 225 ducks. In November, 1894, 150 mallards. In March, 1907, 381 geese in a day and a half. In October, 1880, 318 golden plover in a few hours, 60 of which were killed at one double shot out of a flock numbering thousands.

My list may be imperfect; if so, it is because of omissions. It does seem forty years of persistent duck shooting should show a better average than about 1,500 a year. The item "sundries" is plainly several thousand short, but as a whole it is as nearly accurate as careful revision of old books and papers can make it.

That is all. The writer gained health. The game suffered. Some no doubt will say, "Too bad that doctor ever gave such a prescription. Too bad the sick young man ever lived and grew into such a destroyer of game." In saying so, they may be right.

We drop into a current and drift along for many days, never realizing where we are going or what the end will be; then after much time awake to find a bad past behind us and no future in which to correct our errors. Yet who can say, had he power to turn back time and commence at the beginning again, he would improve on the life already lived, steer clear of rocks that have almost wrecked his bark, and avoid shallows which have retarded progress in things that should have been done and were not. Be charitable all, and "let him that is without sin cast the first stone" of criticism.

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THE WORLD OF SPORT

Amateurism Again

Once again we are on the verge of a discussion of the true nature and content of amateurism in sport. This time the conflict has been precipitated by a suggestion from Gustavus T. Kirby, president of the Amateur Athletic Union, that professionals and amateurs be allowed to compete together, the amateurs taking their prizes in the form of plate. To the rank outsider it is somewhat amusing to note the storm of highly righteous protest that this has called up. Apparently the very foundations of amateurism are threatened and nothing but the most determined efforts of the friends of pure sport can avail to save it. We hold no special brief for either party to the controversy, but we should like to point out one or two slight errors in the arguments of both sides. Mr. Kirby declares that the line between the amateur and the professional is drawn too fine at the present time. We can hardly agree with this. So long as any doubt remains in the mind of anyone as to what constitutes a bona fide amateur, the line can hardly be too fine. If it is definition that is wanted, let us have more definition by all means, until no man can fail to understand when he is and when he is not an amateur. On the other hand, if it is a matter of applying the rules, then the problem is up to the officials in charge.

Rules Clear Enough

In our own opinion, the simpler the definition the better. Few people of intelligence have any doubt as to what makes a man a professional. Violation of the rules is seldom the result of ignorance on the part of the violator. In the great majority of cases the offense is deliberate. That this is true a slight analysis of the conditions under which the rules are broken will prove. The spectacle of a college athlete playing on a professional team under an assumed name is fairly conclusive proof that he knew very well what he was doing. The real problem lies deeper than this, and here comes in our criticism of the opponents of Mr. Kirby's proposal. Merely to prevent amateurs from competing with professionals will not cure the evil. It is quite possible for a man to be to all intents and purposes a professional and to have competed with nothing but amateurs all his life. The trouble with Mr. Kirby's suggestion is not that it tends to degrade athletics, but rather that it presupposes a higher standard than we have yet attained. To our mind the highest ideal possible would be that state in which the standard of amateurism in all its essentials was so fixed in the minds of our athletes that the character of their competitors would in no wise affect the spirit and purpose of their own participation.

An Easy Remedy

Golf is in reality the finest sport in this respect that we have. No one considers that Mr. Ouimet's winning of the Open Championship against a field composed largely of professionals has in any way affected his amateur standing. And yet the prizes awarded to the professionals in that event were money prizes. Wherein lies the difference? Simply in the powers and standing of the governing

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body of the sport. If the U. S. G. A. were unable or unwilling to enforce its own rulings in every case, we could very easily have a state of affairs in golf comparable to that which has arisen at various times in track and field athletics. Suppose that the representatives of the national body who had charge at Brookline had winked at a cash payment to Mr. Ouimet, or had permitted the payment to him, or to some other amateur, of a considerable sum of money to secure his appearance in the tournament, whose would have been the fault? And where would the remedy lie? These questions answer themselves.

It All Depends Personally, we do not regard the professional—either player or coach—as the degrading element in sport that he is sometimes declared to be by the friends of sport. It depends largely on the professional himself. If he is an undesirable sort, he is undesirable without regard to his standing in the sport. We know of amateurs who are not the best companions in the world for the very young. Similarly we know of professionals who are personally and professionally of the greatest value to their charges in every way. Professional baseball is sometimes held up as a school of wickedness for the impressionable youngster. Here again it all depends on the team and on the men who compose it and manage it.

Ahead of Its Time All this argument is aside from the question of competing for pay. On this point there can be but one decision—against it. Summer baseball is very properly under the ban, as we have always contended, as much so as competing for pay while on a college team or any other amateur organization. This, however, is a disease for which we have adequate treatment under the present rules. All that is needed is watchfulness and honesty on the part of the men responsible for the direction of amateur athletics in this country. As we have indicated, the competition of amateurs against professionals seems to us a problem entirely apart from this question. It is probable that Mr. Kirby's suggestion is impracticable at the present time, but we can only say that we wish the world had progressed far enough to make it possible to adopt it.

Princeton's Standard Princeton has taken a radical stand against the professional coach, and, we cannot help thinking, without careful consideration of all the bearings. If it is a matter of economy, well and good. We can understand that, and we can also understand the expressed desire to keep the coach off the sidelines as the director of the game. But why turn your back on adequate instruction for your teams? Isn't that drawing a line where none is needed? If a college objects to the kind of instruction that a particular coach hands out, get another coach. There seems to be some confusion between instruction and direction. It is one thing to prepare a team for its contests, to give its members the benefit of expert knowledge and advice, to insure their full development; it is quite another thing to stand on the side lines while the game is in progress and direct the course of the play. To this we are unalterably opposed. The spectacle of a football coach—not always a hired coach at that—sending in a substitute for the express purpose of conveying information and advice to the captain or quarter-back during the progress of a football game is not a pleasant one. Furthermore, it is a distinct violation of the rules. We are heartily in favor of the abolition of this practice in every form of sport. Incidentally it is a pity that Princeton did not see fit to accept Captain Ketcham's suggestion early in the season for the elimination of the coach as a side-line factor during the game.

The Great Uhlan One wonders if the world is losing something of its ability to thrill over wonderful performances in horseflesh. Have we become so saturated with machine oil and our minds so filled with questions of sparking and carburetion, gears and brakes, that the kings of the turf no longer lift us out of ourselves as in the old days? It is doubtful; surely we

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could not so deteriorate in a few years, and yet the wonderful feat of Uhlan at Lexington a few weeks ago seems to have missed the acclaim that was due it. Not so very long ago, as years go, Maude S., with her 2:8¾ for the mile trot, was the standard. Some hinted at the two-minute trotter, but as a cheerful hope rather than a real expectation. But Uhlan's mile was covered in 1:54½. To be sure he was hitched to a running mate, but for three-fourths of the distance he was pacing the runner instead of taking pace. It was announced as the great horse's farewell appearance, and it was a fitting finale to clip three and a half seconds off the previous best record set by himself a year ago.

No More Hickory

The trotting horse is a peculiarly American institution. Russia is the only other country that has produced anything near his equal, and even the Russian is still far behind in the matter of actual speed. Curiously enough the favorite Russian practice in the sleigh is precisely similar to the method used with Uhlan in his record performance, the hitching of a runner with a trotter. When many of us were somewhat younger we like to think that such a performance as that at Lexington would have been the big news event of the day. Then the high-wheeled sulky was at the height of its popularity and it was our boast that American hickory had carried the American axe and the American trotter around the world. To-day the hickory trees are disappearing before the axe that they ennobled, and the trotter finds himself hitched to a thing of steel and rubber. It is a machine-made age we live in, my brethren, but we can still find time and spirit for a hail and farewell for Uhlan, the best of them all.

More Cup Defenders

There are countless rumors of defenders that will and will not be built for the defense of the *America's* Cup. It seems to be well assured, however, that there will be a Gardner boat in the trials. Mr. Alex Smith Cochran is reliably reported to have commissioned William Gardner to design a seventy-five-footer. That is all that is known about it, but that much is encouraging. Mr. Cochran knows boats, as his experience with the *Westward* proved. The more the merrier. If we could have four boats in the trials, so much the better. There is talk of a boat from down Boston way, and Chicago yachtsmen are said to be seriously considering the possibility of entering a candidate. Sailing on the Great Lakes has been greatly encouraged in the last two years by the success of the *Michicago* in the Manhasset Bay Cup races, and it would be a refreshing state of affairs to see a fresh-water boat contending for the honor of defending the cup. But the time grows short and unless work is begun at once there will be small chance of a new boat showing at her best in the preliminary races next summer.

English Polo Team

It is hard to believe that the makeup of the English polo team which it is planned to send over next year for another try at the cup is as announced in the newspapers. The list as given out is: Captain Barrett, Captain Ritson, Mr. Buckmaster, and Lord Ashby St. Ledgers. What has become of Captain Lloyd and Captain Cheape? An English team that contains neither of these sterling players may be a strong team, but it is a bit hard to believe that it is the strongest that England can put in the field. Captain Ritson we have seen, and while his play is good, it lacks—or at least lacked last June—that quality of fire and determination, that ability to do a little better than his best which is necessary if England is to lift the cup, even with the Big Four out of the way. Mr. Buckmaster is an experienced player, but it is surprising that an arm that was permanently injured last spring should now be restored to international standard. Of Lord St. Ledgers and Captain Barrett we know nothing except what the newspapers tell us, but there seems no good reason to believe that they are greatly above the average. Is it possible that English polo is suffering from internecine war that will not permit the placing of the best possible team in the field? We supposed that trouble of that

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kind was the peculiar property of this country.

More Standard Football

The football season is half over at the time these lines are being written, and any attempt to forecast or summarize would probably be contradicted by events before this issue of the magazine reaches the hands of its readers. The big games are still to come, with their lessons and their disappointments. One thing, however, is sure and that is that the process of equalization is going on this year as never before. This does not mean that Harvard and Yale are playing the same game—far from it—but rather that there is a growing definiteness in the basic principles of play. What this means is perhaps better illustrated by some of the smaller teams than by the larger at this period of the season. Teams like Colgate, Tufts, Trinity, and Williams, to mention only four, are fit opponents for anyone. To be sure, the smaller number of men with whom it is necessary to work and the lighter emphasis on pointing for a particular game late in the season enable these teams to round into shape earlier in the fall than do the larger university elevens, but it is mighty good football that they play all the season through—good not only in point of immediate effectiveness, but sound in theory and in execution.

Small College Coaches

No small part of this improvement in the play of the smaller teams is due to the spread of football knowledge and to the greatly increased number of good coaches available. We are prone to think of the coaches in terms of the Staggs and the Yosts, the Haughtons and the Brookes, ignoring the many men of wide experience and excellent knowledge who are teaching good football at many a smaller college. Fred Daly at Williams, Bankhart, the old Dartmouth end, at Colgate; Professor Gattell at Trinity, Hutchinson at Wesleyan, Hobbs at Amherst, Hollenback at Penn State, these are all capable coaches with a wide knowledge of the game and excellent abilities for their positions. By the way, it is worth noting that Yale, Dartmouth, and Pennsylvania lead among Eastern institutions in the number of coaches furnished to smaller colleges and schools listed in the Football Guide. These institutions have nine graduates each engaged as coaches against four from Princeton and three from Harvard. In the West, Michigan and Wisconsin lead with five each, and Notre Dame follows close with four. In the South appears Vanderbilt with four also, a real tribute to Dan McGugin's ability as a teaching coach.

Michigan Still Defiant

Michigan has dared the Western Conference to readmit her to the company of her former great competitors. That is the only way her overtures can be characterized. The request for readmission was accompanied by the statement that the Ann Arborites would come back only on condition that the rules were changed so as to require all conference action to be the result of a unanimous vote. In other words, the Michigan people said, "We will come back if you will put into our hands the power to kill any legislation we don't like." Naturally the invitation to suicide was not accepted. At this distance and lacking special inside information, it is impossible to judge all the merits of the case. This is not so much of a handicap as it might seem, however, as our point of view is therefore that of the great majority of lovers of good sport and good fellowship. To such observers the attitude of Michigan is a bit incomprehensible. It seems that we are seeing here some of the evil results from faculty control, with its continuance of power and of prejudice. A changing undergraduate control, shifting from year to year, would probably have resulted in the burying of the old grudge long since and the forgetting of the old differences. We are convinced that the Michigan undergraduate would rather see his teams playing Chicago and Wisconsin than Pennsylvania and Cornell. If he doesn't, he should. One good friendly enemy next door is worth a dozen opponents from different parts of the country with different affiliations and interests. As it is, Michigan is lonely, and no one cares greatly what she does.

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Playing in her own crowd, she immediately becomes an important factor.

Forget the Championship

This is an old subject for this magazine, and no one is required to read this paragraph who doesn't care anything about our views on championships. That view is frankly that the majority of championships and records make us very weary. Ever and anon we are attracted by a newspaper report of a new automobile record. We read and discover that it is a new record for a mile and three-fifths made by a car having cylinder dimensions of two hundred and twenty-one cubic inches. Presumably there is another record for cars driven by men with brown eyes or their hair parted in the middle. Then there is that World's Series business. Of course, we know it's only a name, but why use names that mean nothing? The Athletics are champions of America, perhaps, but that's all. And isn't that enough? We aren't sure they are even that except for purposes of newspaper statement. When young Ouimet won the Open Golf Championship the newspapers blossomed out with headlines about Golf Championship of the World. Piffle! There isn't any such a thing. Last summer one New York paper gave that proud distinction to the British Amateur at St. Andrew's. We once knew a man who claimed to be the world's champion in Spencerian penmanship. It was a noble claim, and we are sorry now we smiled. The poor penman was not so absurd as he seemed.

On Top of Mt. McKinley

It is a good story that Archdeacon Stuck tells of the climbing of Mt. McKinley —Denali, to give it the good Indian name—in the November *Scribners*. It was on the seventh of June that he reached the summit of the South Peak, nearly a year after the climb of the Parker-Browne party. Full observations were taken and the height was determined at approximately 20,500 feet, almost precisely the figures given by Mr. Belmore Browne. The estimates are based on the reading of the mercury barometer, the aneroids proving untrustworthy above eleven thousand feet. The exact figures could be given only after a careful checking up with the simultaneous base readings at Fort Yukon. The route followed was practically the same as that taken by the Parker-Browne party in 1912, save where the earthquake that occurred two days after that party came down off the mountain had rendered it impassable. Mr. Browne's experiences with the cold in the extreme altitudes were duplicated by the Stuck party, but they were favored with clear weather on the summit, enabling them to make full observations. Apparently four below zero twenty thousand feet in the air is as killing as two or three times that figure on the lower levels. The claims of the Pioneers from Fairbanks were also substantiated by the Stuck party. The peak climbed by the former was the North, the lower of the two. The fourteen-foot flagstaff carried up by the "Sour-doughs" was plainly visible through the glasses still standing sturdily against the gales. Dr. Stuck very properly protests against the attaching of the names of politicians who never saw Alaska to peaks that already have perfectly good Indian names. His suggestion is that the native name of Denali, "The Great One," be established as the name of the whole mass of the mountain, the South Peak to be continued as McKinley Peak and the North as Pioneer Peak in honor of the unique feat of the party from Fairbanks.

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NEWS OF THE OUTDOOR WORLD

Football

FOOTBALL games played during October resulted as follows: Pennsylvania 13, Franklin & Marshal 6; Yale 0, Maine 0; Harvard 14, Bates 0; Dartmouth 53, Colby 0; Cornell 37, Oberlin 12; Army 34, Stevens 0; Colgate 21, Amherst 3; Pennsylvania 10, Lafayette 0; Wesleyan 13, Bowdoin 7; Penn State 48, Carnegie T. L. 0; Williams 20, Vermont 0; Iowa 45, Iowa Normal 3; Tufts 52, New Hampshire 0; Carlisle 21, Lehigh 7; Princeton 69, Fordham 0; Purdue 26, Wabash 0; Minnesota 25, Ames 0; Navy 0, Pittsburgh 0; Northwestern 10, Lake Forest 0; Wisconsin 58, Lawrence 7; Chicago 21, Indiana 7; Nebraska 19, Washburn 0; Virginia 54, South Carolina 0; Georgetown 44, Randolph-Macon 0; Yale 27, Lafayette 0; Harvard 23, Williams 3; Princeton 28, Bucknell 6; Pennsylvania 20, Swarthmore 0; Carlisle 7, Cornell 0; Dartmouth 33, Vermont 7; Navy 23, Georgetown 0; Army 29, Rutgers 0; Springfield 19, Amherst 6; Penn State 16, Gettysburg 0; Syracuse 6, Rochester 0; Bowdoin 0, Trinity 0; Brown 6, Ursinus 0; Maine 44, Rhode Island 0; Ohio State 14, Western Reserve 8; Michigan 14, Mount Union 0; Wisconsin 13, Marquette 0; Purdue 34, Northwestern 0; Kansas 55, Washington 7; Illinois 24, Missouri 7; Yale 37, Lehigh 0; Harvard 47, Holy Cross 7; Princeton 13, Syracuse 0; Pennsylvania 28, Brown 0; Cornell 10, Bucknell 7; Dartmouth 48, Williams 6; Pittsburgh 12, Carlisle 6; Army 7, Colgate 6; Navy 29, Dickinson 0; Trinity 14, Amherst 0; Tufts 20, Maine 6; Washington & Jefferson 17, Penn State 6; Michigan Agricultural 12, Michigan 7; Trinity 14, Amherst 0; Bowdoin 13, Vermont 3; Wisconsin 7, Purdue 7; Nebraska 7, Minnesota 0; Chicago 23, Iowa 6; Wesleyan 16, Union 3; Illinois 37, Northwestern 0; North Carolina 13, South Carolina 3; Yale 0, Washington & Jefferson 0; Harvard 29, Penn State 0; Dartmouth 6, Princeton 0; Carlisle 7, Pennsylvania 7; Pittsburgh 20, Cornell 7; Syracuse 36, Western Reserve 0; Army 2, Tufts 0; Navy 76, Maryland Agricultural 0; Williams 23, New York 0; Wesleyan 9, Amherst 0; Indiana 0, Illinois 0; Brown 26, Springfield 6; Lehigh 7, Muhlenberg 0; Michigan 33, Vanderbilt 2; Michigan Aggies 12, Wisconsin 7; Chicago 6, Purdue 0; Minnesota 30, North Dakota 0; Missouri 21, Ames 13; South Dakota 42, Denver 0; Maine 34, Bates 0; Virginia 13, Georgia 6; Alabama 26, Tulane 0; Iowa 78, Northwestern, 6.

Miscellaneous

A 30-hp. motor-car covered 1,078 miles, 460 yards in twelve hours, breaking the previous record of 914 miles, 640 yards made in May.

Pegoud, the French aviator, succeeded in looping the loop in his monoplane eight times in succession.

Twenty-eight men were killed when the latest Zeppelin dirigible exploded in Germany.

Ralph Rose, holder of the Olympic and world's records for shot-putting, died of typhoid fever after a brief illness.

Princeton beat Yale in the dual boat race at Princeton by nearly a full length in a race of a mile and five-sixths.

Victor Stoeffler, of Germany, made a new twenty-four-hour flight record in a monoplane, going 1,376 miles.

Meiji University, of Japan, shut out the visiting University of Washington baseball nine.

Pat Ryan, of the I-A. A. C., hurled the 12-lb. hammer 213 feet 9⅛ inches, displacing Flanagan's former record of 207 feet 7¾ inches, made October 24, 1910.

Miss Ravenscroft, of England, won the Woman's National Championship in golf by defeating Miss M. Hollins.

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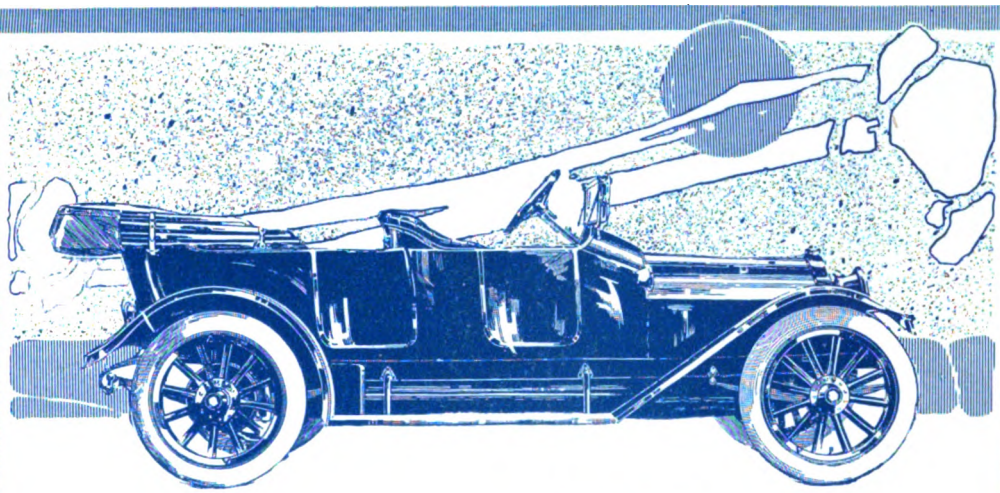

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JANUARY 1914 PRICE 25 CENTS

OUTING

Dartmouth—a Winter College

How to Snowshoe

Climbing for Caribou

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And woodland pleasures,—the resounding horn,
The pack loud chiming, and the hunted hare,
So through the darkness and the cold we flew,
And not a voice was idle; with the din
Smitten, the precipices rang aloud;
The leafless trees and every icy crag
Tinkled like iron; while far distant hills
Into the tumult sent an alien sound
Of melancholy not unnoticed, while the stars
Eastward were sparkling clear, and in the west
The orange sky of evening died away.

—*WILLIAM WORDSWORTH.*

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FIGHTING THEIR WAY UP INTO THE FLOOR OF TUCKERMAN'S RAVINE. THE STEEP ASCENT AND CRUSTED SNOW BRING BOTH HANDS AND FEET INTO USE

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OUTING

JANUARY
1914

SPORT TRAVEL FICTION ADVENTURE

VOL. LXIII No. 4

DARTMOUTH—A WINTER COLLEGE

By HENRY JAY CASE

PHOTOGRAPHS BY MEMBERS OF DARTMOUTH OUTING CLUB

THIS is a story of a liability that became an asset. It is also a striking illustration of OUTING'S argument that the Winter Outdoors need not be a closed room for anyone with health and spirit. For Dartmouth men it offers a great playground, and their case is by no means unique. The same opportunities, in greater or less degree, offer right across the northern United States; all that is needed is to seize the chance.

A WINTER playground in a great white out-of-doors for six months in the college year, a hunting ground for woodsmen, naturalists, and campers during the remaining four, is what Dartmouth men would make of the New Hampshire mountain trail from Hanover to the ancient college land grant just under the Canadian border. They have banded together not unlike the Forest Rangers of old and are blazing the way, year by year, with a chain of permanent camps, one day's march apart, through the heart of the White Mountains, to the big pine forest in the northern part of the state. Each year's progress toward the desired goal is celebrated with a snow festival, at which the story of the season's work is told and the students demonstrate the prowess they have acquired with snowshoe and ski. There is no such out-of-door movement like it in the history of educational institutions.

In the Outing Club and its Winter Carnival, the student body has struck a new note in college life, and quite unconsciously developed a great natural asset for Dartmouth. The long, tedious winter, as old as the hills themselves, this winter which Dartmouth, with attractive interiors for work and recreation, has for a century been trying to forget, suddenly becomes one of the conspicuous features of college life. Undergraduates and alumni bless latitude 43.40 and reconstructed fireside skeptics now declare that four years at Dartmouth without the tonic which Nature puts in the winter wind and sky, a personal knowledge of the snow-clad hilltops, and the odor of the hemlocks

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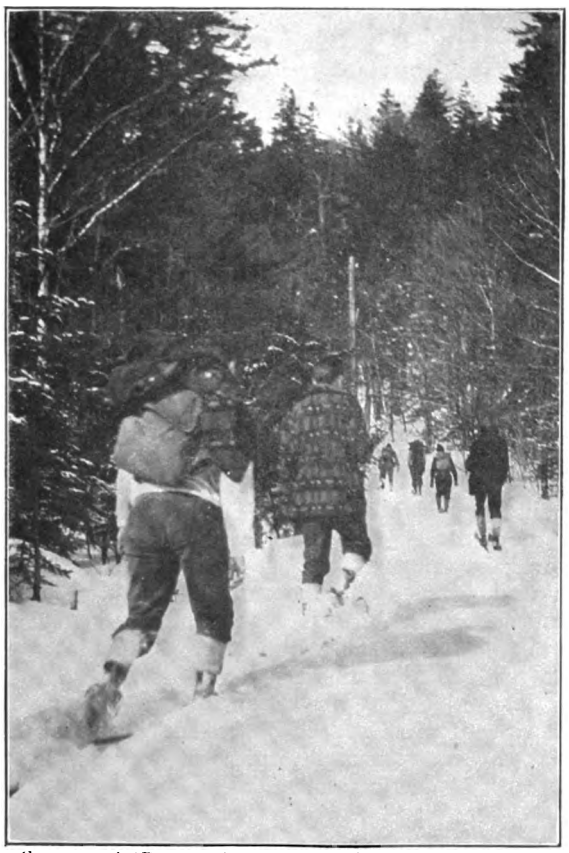
and the pines, are four years wasted. The "Old Grads" take their hats off to the younger sons, fresh stock from new districts, city-bred youths in a large measure, with an overflowing enthusiasm for the silent places.

To follow a file of these present-day sons, garbed not unlike the men in homespun and buckskin a century before them, is to wonder how the call of the woods could lie buried for so many generations. Here is an institution built with the broadaxe in a wilderness, rich in tradition of the woodland trail, Indian legends, and a rugged race of pioneers, coming back, in this day of expensive specialties, to a simple sport of a frugal, hardy people. The lone farmer, surprised as the pack line slips past his isolated cottage, goes back to his fireside to shake his head and ponder on the sight. He can't see why students do such things when they should be studying. But back in the timber and away from the world, where there is not even a newspaper, the timber "cruiser" and the "lumber jack" know what brings the students out. They give them a hearty hail and have a fellow-feeling when the line goes by, scuffling through falling leaves, or swishing down the trail, tired and hungry and eager for a sniff of the wood smoke of the fire from the permanent camp.

Eleaser Wheelock and his pioneers took to the woods to preach civilization; the present generation to escape it. The long trail and the frozen pack were part of the day's work to Dartmouth's founders; to her undergraduates, to-day, a breathing spell to make them work the harder. Snowshoe, ski and toboggan create the lure that empties easy chairs and window seats, sends the occupants into the invigorating air of winter, makes red blood, builds up worn-out tissues, and fills classrooms and recitation halls with clearer heads and redoubled energy.



Courtesy of "Dartmouth Out o' Doors"

PLOWING STEADILY ALONG IN DEEP LIGHT SNOW. THREE OR FOUR PACKS CARRY FOOD AND EXTRA SWEATERS FOR THE WHOLE PARTY

On the banks of the Connecticut where a log cabin, eighteen feet square, sheltered the first students, six years before the outbreak of the American Revolution, Eleaser Wheelock planned a college for the education and conversion of the American redman. With the river at its door, the great forest at its back, and the skyline of the White Mountains ever before them, it was an ideal location for an active, out-of-door race. Settlers, their sons and grandsons, flocked to its open doors, but, although books and tuition have been free to him since the college opened, the redman as a student never rubbed elbows in any great number with his white brother at Dartmouth. Carlisle at the Polo Grounds last autumn was more Indians

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at one time than the wearers of the green probably ever saw before. And few in the stands, who watched these two teams battle for football supremacy on November last, realized that each was upholding the honor of an Indian institution.

Dartmouth's athletic record compares favorably with those of the universities and colleges much larger. Good material is one thing responsible for this. The atmosphere of the place seems to build a rugged student body, and yet, in these days of specialization, a boy has to be exceptionally developed to make the track, football, or baseball team. The sum total of those who do is a small percentage of the student enrollment, and at other colleges and universities the opportunity for them to get in any form of out-of-door exercise is limited.

Courtesy of "Dartmouth Out o' Doors"

CLOTHED AND TRAPPED FOR WHAT THE WEATHER MAN MAY BRING—TYPICAL OUTING CLUB COSTUME

At Dartmouth the Outing Club, open to the whole college, offers exactly the outlet needed. Any boy with energy, be he little or big, can take the trail, and most boys who do never become weaned from it. The forest in summer and autumn is the home of the speckled trout, the partridge, woodcock, and deer. In winter it offers sport to all manner of men from the hollow-chested plodder to the strongest-limbed and surest-balanced boy on the campus. Snowshoe and ski afford athletes or non-athletes as much or as little exercise as they want and all of it in a sharp, invigorating atmosphere. They develop muscles useful in after life, give the delicate boy the digestive apparatus of a camel, fill him with confidence, and teach him a hundred things about nature that he never knew before. Particularly strong is this appeal to the city-bred youth and correspondingly great is its effect upon his whole physical and mental make-up.

Maybe it was the Indian lore in its traditions that developed this great out-of-door feature at Dartmouth. The legends fit perfectly into a country of high elevations and magnificent panoramas, the entire stretch of which lies in the snow belt. This snow belt is a north and south strip of New Hampshire, lying between the Green, Franconia and White Mountains, extending from the state's southern line straight north to Canada. Below, and even on either side, the humidity turns snowstorms into rain, causing the snow to melt and quickly disappear.

Within the belt the snowfall is heavy and it stays; the air is drier and colder. It is an exception when the countrymen here do not have sleighing from Thanksgiving to April. The snow piles, pow-

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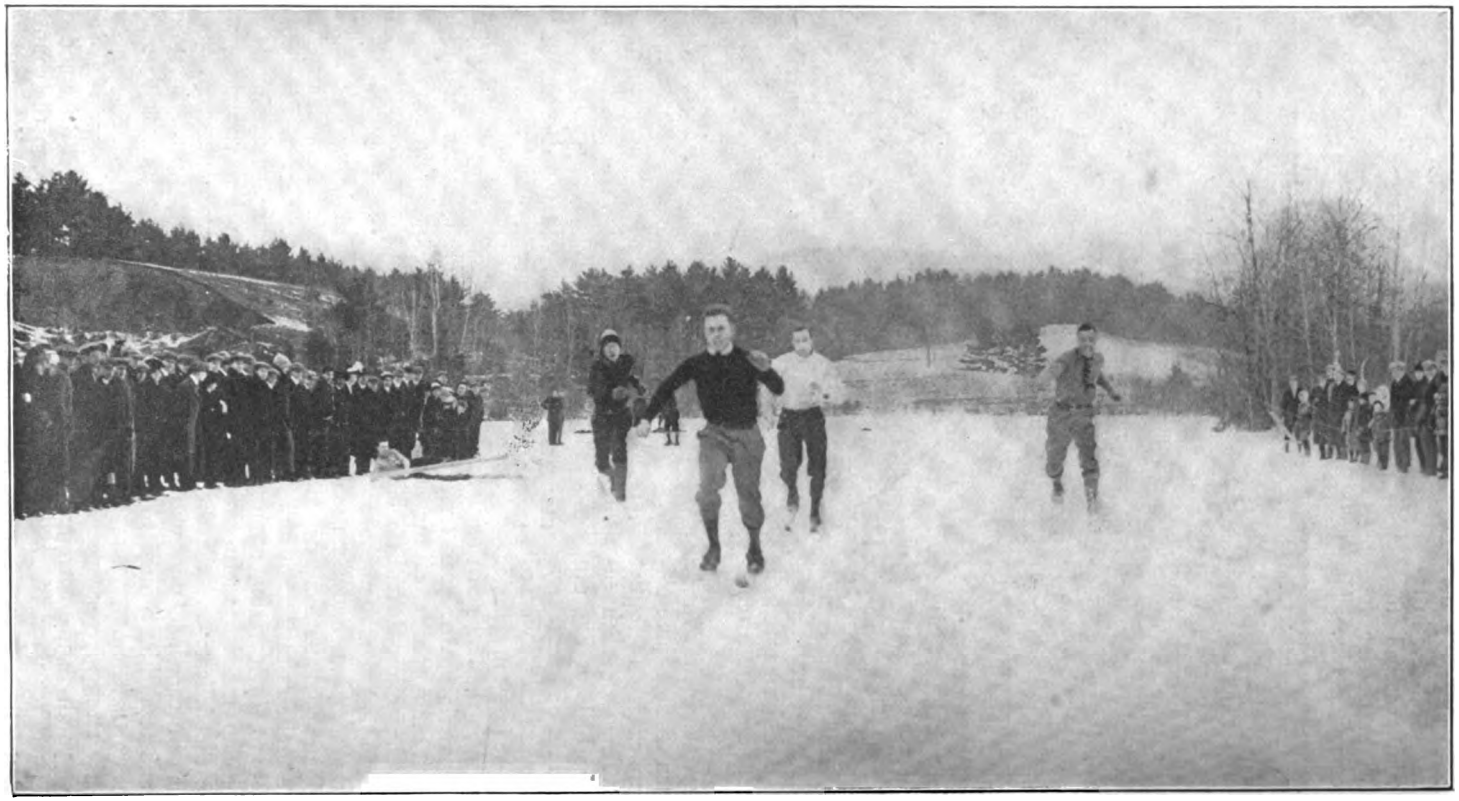

THE FINISH OF A DASH ON SKIS IN THE WINTER CARNIVAL

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SKI-JUMPING IN THE VALE OF TEMPE, DARTMOUTH COLLEGE. TAKEN IN A SNOW STORM

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A DARTMOUTH PARTY AT THE TOP OF MT. WASHINGTON

dery and fluffy, over forests, fields, and ice-clad ponds, three and four feet deep, making some of the best snowshoe and ski trails in the world. Incidentally, this depth of snow is the explanation of Dartmouth's mediocre hockey record. There is so much snow and it takes so much time to keep the hockey rinks free and clear of it that hours are limited for play and practice.

But the deeper the snow, the better the ski and snowshoe running, and within an hour's trail from the campus are countless scenic and historic places, which make ideal objectives for practice runs leading up to a full day's march.

The Green Mountains lie to the west and across the Connecticut, the Franconia Range to the east, and the Presidential Range of the White Mountains, continuing, farther north and to the east of the Franconia. North, still, beyond the highest peaks of the Presidential Range and extending practically to the Canadian border, lies the Dartmouth Grant, some thirty thousand acres of virgin pine and hemlock, kept under practical forestry since it was deeded to the college in the days of the Crown Government.

Straight north out of Main Street in Hanover is a barren knoll, known as Meeting House Hill, from which, looking south down the Connecticut Valley, one may see Mt. Ascutney looming across the skyline nineteen miles away. Inside that distance, and under ten miles, is the northeastern gate of the great Corbin Game Preserve. Turning to the north, Mt. Moosilauke, Smart's, and Cube all stand out in bold relief against the sky, and if the air be clear Mt. Lafayette may be discerned in the far distance. Eight miles to the east is the Outing Club Camp from which Moose Mountain is climbed. There are rude shelters now on all of these trails, as well as up the Pompanoosuc, which empties into the Connecticut five miles above Hanover. The elevation averages between six hundred and four thousand feet. The valleys shelter picturesque farms, the hilltops covered with brush to the timberline, and all of it a wild game country the year round. The White Mountains themselves need no comment. Their wonderful scenery is famous the countrywide.

With so much picturesque America at their door, it was not natural for healthy, vigorous youths to hug their firesides all winter long, year after year, until the crack of doom. With such a combination of splendid country and the imagination of American youth, something simply had to happen. It did happen. And

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THE GREAT WINDS AT THIS ALTITUDE KEEP THE SUMMITS SWEPT ALMOST FREE OF LOOSE SNOW

in the evolution was born the Dartmouth Outing Club. At first the new movement took shape in 'cross-country excursions. Dartmouth classes always produced a handful of trout fishermen, and probably every undergraduate has at some time or another paddled a canoe on the Connecticut. The Freshmen always climbed at least one mountain, and, in the autumn, hunters took to the woods for partridge and deer.

But all this was spasmodic. There was no general migration of students to the woods either in summer, winter or autumn, and if any one sport did happen to get started it invariably died with the passing of the season. Then it was back to the campus again, or to the fireside or window seat to figure how long it would take to save up expenses for a week-end in Boston.

Four years ago the new generation from cities and towns away from New England, fresh offshoots from old Dartmouth stock that had left Hanover years before, began to make its impression on the college town. One of the things these youngsters started was a revival of winter sports. Snowshoe and ski was the particular form of diversion, and while the members didn't do much more than dabble in the drifts back of college they at least showed their eagerness to become good performers.

An upper classman, a Vermonter, himself a ski runner, caught the inspiration of the moment and formed the Dartmouth Outing Club. He raised the call of "the joyous winter" and in response to his appeal in *The Dartmouth* of January 9, 1910, some fifty men, eager to escape the tedium of both work and play behind bolts, drew up articles of organization, signed them, and elected the lone ski-runner, F. H. Harris, president and first leader of the venture. Within three years, the club had gained a seat in the College Council, and its gala day—the Winter Carnival—was settled as an institution.

The first president *made* the club. For two years he routed the lazy out into the drifts, maintained a publicity bureau for the New England and Western newspapers, shouldered irksome financial burdens, and never once failed to be on hand to lead the line of "Tyros" away from Dartmouth Hall. Now, instead of a timid student or two and a few lonesome tracks in the snow, he sees a whole *college* out on trail.

Two of the charter members of the Outing Club were well versed in snowshoe and ski running before they en-

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WHERE THE SNOW LIES DEEP THEY FALL INTO INDIAN FILE AND LET THE TRAIL BREAKERS DO THE HEAVY WORK

tered college. One came from a New Hampshire lumber town where he was taught ski running by Norwegian settlers fresh from the Baltic peninsula. The other was the Vermonter. The club was fortunate in having such instruction. Snowshoe as well as ski running in isolated districts is a serious business. It is rather grim humor to be stranded with a broken ski or snowshoe twelve miles from the nearest assistance with a pack on your back, four feet of snow beneath you, and the thermometer ten or twelve degrees below zero. It requires a strong man and a resourceful one to keep a band of novices on the march when through cold, exposure, and hunger they are ready to lie down and go to sleep. Many a green youth will take the trail with abundant spirits and energy, but with a carelessly packed haversack and not a single extra set of straps or buckskin thongs for emergency. Without help he might as well be marooned on top of the Rockies as break down in deep snow any distance from food and shelter.

Each man on the trail is directed to clothe himself approximately as follows: Ten-inch, double-soled moccasins, two pairs of heavy woolen stockings, woolen shirt, mackinaw coat which keeps the wind out, has a great-collar and snow does not adhere to it; a toque, double knitted mittens, and a face mask for severe weather. When the "hike" is only for the day very light cotton underwear is recommended, but wool is necessary if the wearer intends to spend the night in shelter or cabin.

The leaders first take their charges over the fields and hills back of the campus until they feel encouraged to make wider circles and vary the going. Then they lengthen the distance of a day's run and begin to put weight on the backs of the runners. A beginner on snowshoes can easily outdistance a novice on skis, but, on the other hand, the expert skirunner can leave behind the pick of the shoe men. Some men never make skirunners, while others take to it immediately and have the strength and endurance to stick to the pacemakers no matter what the distance.

Snowshoeing is easier to pick up, but it requires more stamina than is needed for a day's run on skis. Therefore, green men picked for the first overnight trip into the hill country at the week-end have to be carefully considered before the party starts. At Dartmouth

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they are divided into ski and snowshoe divisions, pacemakers carefully selected, and, even more carefully, the rear guard. This rear guard assumes the responsibility of picking up stragglers, of mending broken straps and thongs, of spelling a tired man with his pack, giving first aid in case of injuries, or cheering up tired and discouraged ones to flounder on to the fire and shelter for the night. This order of march is never forgotten, no matter how short the run. Each leader, whether with pacemakers, main party, or rear guard, takes his part as seriously as though he were traveling toward the North Pole. It doesn't take the "big march" up Mt. Washington to bring out the wisdom of these precautions. Leaders' reports on much shorter runs are full of emergencies which experience and cool heads have easily surmounted.

Records by card index and filing system are kept of each run, summer or winter, by the secretary of the club, giving the temperature, wind, depth of snow, route, time, members of the party, any new device or accoutrement tried and results, and careful notations of all new trails blazed or discovered. There is also a record kept each year of what each member does in and for the club and each year a collection of lantern slides for use at the annual meeting is made from the best films turned in by the members. Thus there is steadily accumulating valuable data and informa-

AS YOU LEAVE THE TAKE-OFF AND LEAP OUT INTO SPACE

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tion ranging from equipment to terrain, for every variety of trail leading from the campus, short runs for the beginner and long ones for the well-hardened scout.

Birth of the Winter Carnival

Its second season found the Outing Club bigger and busier than ever and this year was born the Winter Carnival. The occasion assumed the prominence of a "Junior Prom" and visitors fairly swamped the town, many of the alumni taking the opportunity to see for the first time the new Dartmouth winter. They came doubting and went home convinced by the awakening. The carnival brought house parties, pretty girls and their chaperons, mothers, fathers, and sisters. To the uninitiated the event was as much of an indoors as an out-of-doors affair, but the indoors end of it proved only the spacing of an interval. From the first of the "prelims" in the ski and snowshoe dashes and the trials for the relay races it was a real winter out-of-doors spectacle which kept the spectators hanging on till it was too dark to distinguish a snow drift from a snow plow.

By the time the ski jumping of the last day came around the fixture of the Winter Carnival as a permanent college event was firmly established. There were 'cross-country runs by ski and snowshoe men, distance races as well as sprints, obstacle races, and novice and junior events in all, including the jumps. A student from Florida proved a winner in one of the ski events. Point and place trophies were awarded to the winners. In February, 1912, a second carnival was held on a more pretentious scale and was an even greater success.

To those who had never seen ski jumping before, the swift downward flight of the contestants, the spring at the edge of the take-off, the rush through the air, and the landing below, whether successful or disastrous, was highly impressive. There was as well a real red-blood thrill in each event, and when darkness finally drove participants and guests to cover there were stories and experiences told around the fire. Quite a treat indeed was the exhibition of the club's lantern slides illustrating the club's activities up and down the cabin chain on the trail between the Dartmouth Grant and Hanover.

This year the carnival, with its winter meet, dances, and attendant festivities, is planned for the middle of February. It will be a big show for alumni of the Middle Atlantic, Middle West, and Western States, who plan to come back especially to see the transformation of a Hanover winter. The Outing Club's "big march," that to the White Mountains, which has also come to be an annual affair, will take place the last of February or the first of March. Another attempt will then be made to gain the summit of Mt. Washington, a feat which members of the Outing Club have already succeeded in accomplishing, the highest point east of the Rockies ever reached on skis.

Climbing a mountain like this one is a feat for only the hardiest and surest ski and snowshoe runners, and yet all of the effort and exposure by the ski men is made as much for the sport of the slide down as the view from the top, and the snowshoe men go along because they don't wish to be out-done by the men on skis. Four miles only of this descent can the ski men take at a coast, and the record for that distance is fourteen minutes, made by an Outing Club man year before last.

A leaf from the record of one of the members of D. O. C. White Mountain expedition last winter lends a breath of the highland air:

"The mountains were partly capped next morning, but the sun was bright below and the day boded well for a successful trip into the Great Gulf. The first pull to the Half-Way House on the carriage road proved hot work, although the snowshoeing was good after the first mile. At Half-Way House a split occurred. Four men had determined to attempt the summit of Washington. * * * The rest of the party experienced an eventful descent into the Great Gulf. A hard crust made footing impossible, so the only alternative was to sit down and slide, and anyone who had felt chilly from

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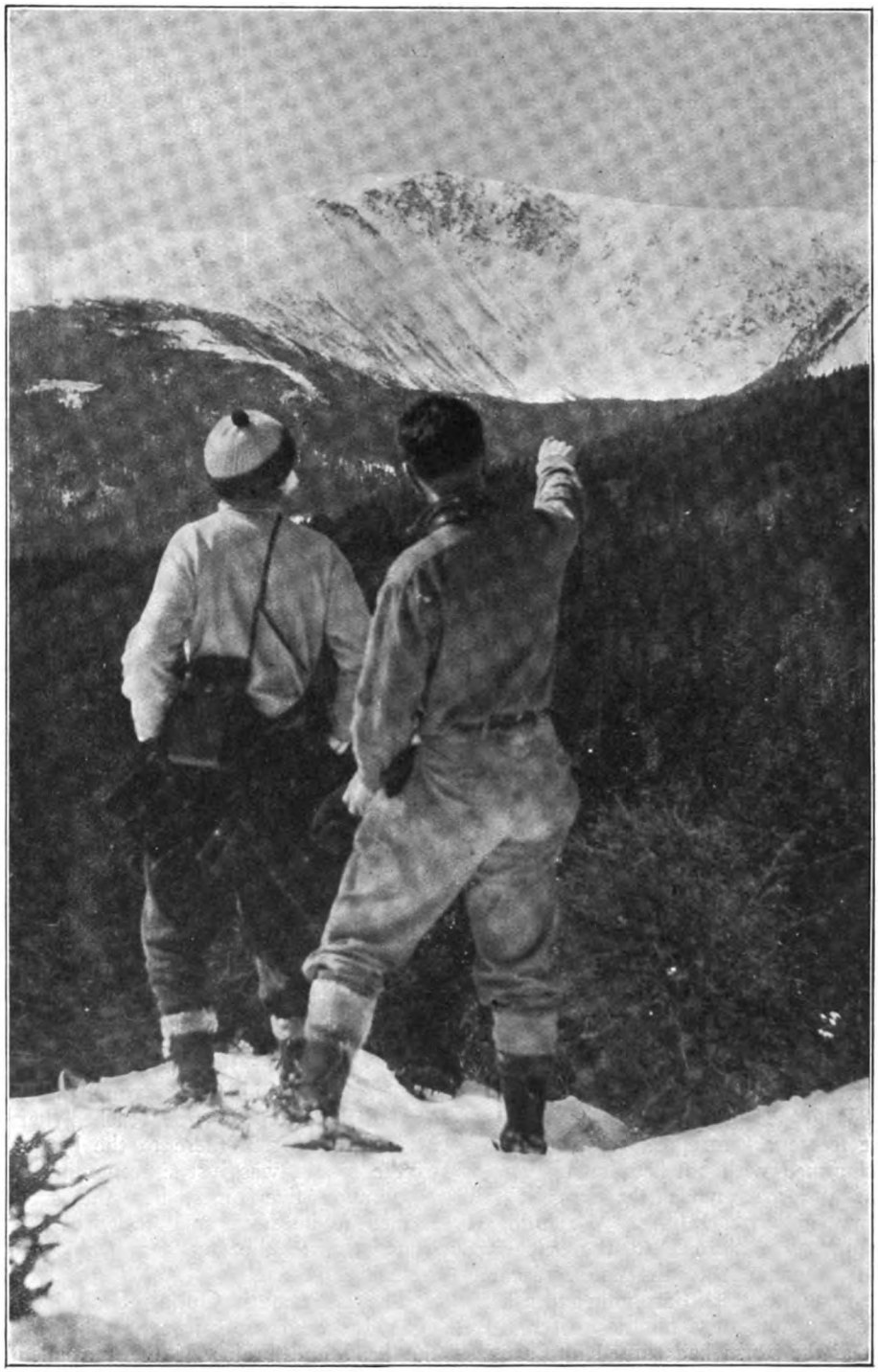

Courtesy of "Dartmouth Out o' Doors"

SHOWING THE SIGHTS TO A NOVICE. A WONDERFUL PANORAMA IN GREEN AND WHITE

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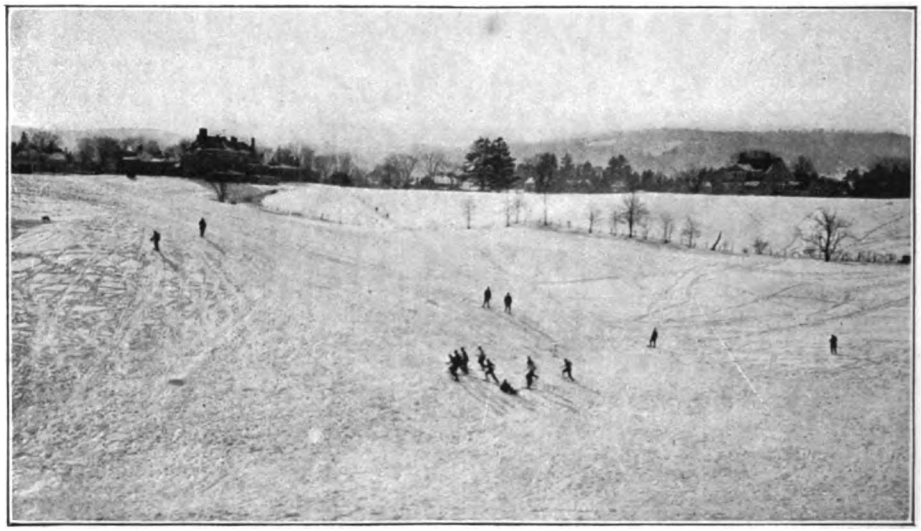
sitting in the drifts was soon entirely warm from friction, and lucky if he had any trousers left at all. Below the tree line, drifts were soft and deep and breaking trail proved hard work. The ski men, in particular, had their difficulties in getting into the gulf. Lunch was eaten at Great Gulf Camp. The snowstorm was closing in thick, and the cold was so intense that the idea of going up the Head Wall was abandoned. The ski men followed the river bed with some interesting slides, while the snowshoe contingent took the regular trail down the river."



AT THE WINTER CARNIVAL. A GLIMPSE OF THE CROSS-COUNTRY SNOW-SHOE RACE

One of the members who finally reached the top of Washington writes as follows:

"We roped ourselves together, twenty-five feet apart, strapped on ice creepers, and armed with hatchets, stakes, and a half pick-axe, made the assault. A heavy snow was falling. We followed up the wagon road to the telegraph poles, then kept to the poles, reaching the two-mile post in an hour and a half. We kept on fifty minutes after that, but as the storm had turned into a blizzard and it had become extremely cold, three of us froze our faces. One of the fellows was practically exhausted, having to rest every few minutes, and another was not far from the same condition. As this looked bad, we turned and started back. At times it was snowing so hard that I couldn't see D—— less than twenty-five feet behind me.

"We reached the Half-Way House about 3:45 and had our lunch, thawing it out on the stove. I left the house on skis at five o'clock. The first half mile was bad going, as there was a glare crust in which you couldn't sink at all. Thus, when I struck the curves and started to turn, my momentum would slew me off the road and into the trees unless the curve sloped in, so holding my momentum. This caused me to tumble three or four times before reaching the steep side slide where you look off toward the Glen House. I reached there at 5:02 and from there to the bottom of the road I was just sixteen minutes. I tumbled five times, but the snow seemed to be faster than last year, as it had thawed the day before and then frozen."

The Dartmouth Outing Club is an assured success, and just at present is the head and brains of the movement which eventually is going to make the college land grants, about twelve miles this side of the Canadian border, something nearer a reality. Already gifts

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of land, some with cabins and some without, have been turned over to the club, most of them outright for use in perpetuation of the plans of the founders.

Cabin No. 1 in this chain of camps is a reality. It occupies a site on Moose Mountain, near which the first shack of the Outing Club formerly stood. The site is historical, to the club at least, for here was the first shelter built by the students. A party of six students escorted a horse and bob-sled loaded with lumber and carpenter tools up the trail to the old tumble-down cabin one winter's day. The distance, which is eight miles, required from ten in the morning until five at night to cover, this including loading and unloading the sled several times on account of the deep snow, packing of the contents on the backs of the students, and practically carrying the horse also before the load was landed on top of the mountain. The repairs to the shack were made by lantern light with the thermometer at zero, and it is worthy of note that it was necessary to do all this and to start the fire before the almost exhausted students could lie down to rest and be reasonably safe from freezing.

The new cabin on the site of the old was built during spring vacation last year, by a boss carpenter and a dozen members of the Outing Club, who gave up their vacation for the purpose. Twenty feet deep and twenty-five feet wide, with eight feet of piazza, this shelter is provided with bunks and a kitchen that will care for thirty men over night. The house was dedicated on Memorial Day, 1913, by a party, most of whom made the trip up the trail on foot. The college president was there and several alumni, including a member of the class of '66. Dr. John Gile and his wife, who had fished for years on the property, were also there, and on the spot they deeded the land to the club, and Franklin P. Shumway, of Boston, presented the cost of the cabin. This in itself was a great lift for the club, but it seems that Memorial Day, 1913, was to be momentous in the history of Dartmouth.

The member of the class of '66 above referred to, the Rev. John Edgar Johnston, following Dr. Gile, announced that he also wanted to make a gift, and then and there handed over the deed to Skyline Farm, on the north side of Mann's Hill, overlooking the entire

APPALACHIAN MT. CLUB SHELTER CAMP AT HERMIT LAKE, TUCKERMAN'S RAVINE—WALLED IN BY THE BIG SNOWS CLEAR TO THE ROOF BEAMS

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END OF A 'CROSS-COUNTRY SNOWSHOE RACE

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White Mountain Range. This farm embraces one hundred acres and has several excellent buildings on the property, to which Mr. Johnson has since added a dormitory for housing twenty-five men. From the ninety-foot veranda on the valley side of this dormitory one may look north to Dixville Notch, east to Mt. Washington, and south to Franconia Notch, as fine a view, in the opinion of many woodsmen, as any in the White Mountains.

During the succeeding summer, this friend of the Outing Club purchased and presented another twenty-five acre tract on the southwestern flank of Cube Mountain, partly pasture and partly woodland. A mountain brook crosses the middle section, and, even in dry weather, runs clear and cold. There is a spring on the lower edge of the property, and above the spring in a clump of birches is the camp site, commanding a view of the western horizon, including the sharp peak of Killington in the Green Mountain Range and the hills along the Connecticut Valley.

Farther up the slope, just above the birches, the view broadens until it takes in the whole western horizon from the inner bulk of Smart's Mountain to Piermont, 'way to the northwest, with the long forest and pasture slopes of the towns of Orford and Fairlee and the Connecticut Valley in the foreground. Cube Mountain Camp is twenty miles from Moose Mountain Camp, a distance easily covered in a day, even under a heavy pack. The donor has started a building fund for this camp with a check for one hundred dollars, and friends of the club in distant cities are raising the rest of the money necessary.

That this clergyman believes in the Outing Club and its good effect upon Dartmouth was demonstrated again a few months later, when he purchased and gave to the club another camp site on Glen Cliff Trail up Mt. Moosilauke, one day's march from the Cube Camp, and he has since intimated that he will hold, until the club is ready to build, a camp site in the Lost River region, near the Agassiz Basin on the other side of Moosilauke.

Dartmouth Outing Club now has practically four camp sites—Moose Mountain, Cube Mountain, Moosilauke, and Skyline Farm, making a continuous trail of over thirty-five miles toward the Dartmouth Grant. This does not include the Lost River Camp, which will make the beginning of a trail through Thoreau Falls to Willey Pond and on over to the Presidential Range. The next camp site wanted is a location on the west side of the Presidential Range, and another one day's march to the north.

Then o'er hill and dale with an even trail,
He fared through the North Countree,
And he cried with delight as he skimmed from the height,
"Hurrah for the fleeting Ski!"
—*From the Song of the Ski.*

"In Quest of the Canvasback" is the title of an article by Herbert K. Job on his experiences at Lake Winnipegosis in Manitoba. He caught his ducks in the egg, hatched them, and brought them safely back with him. Unusually good photographs.

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BOB-SLEDS AND RIDING THEM

By WALTER PRICHARD EATON

DRAWING BY WALTER KING STONE AND PHILLIPPS WARD

MEN and women watch the speed gauge of their motors creep up past twenty-five miles, past thirty miles, past forty miles, with various emotions (not always those of pleasure), and fancy they are realizing a velocity on the open road peculiar to the twentieth century. Nonsense! We used to travel sixty miles an hour, at the very least, down Phillips Street hill from Andover almost to Ballardville, on a ten passenger bob-sled, with Buckie Blagden at the wheel, and the muffler of every one of the ten passengers was cut out, too, so that even a modern motor cycle ridden by a reckless chauffeur going home from his day's work to supper, would have been a cathedral hush beside us! Forty miles an hour in an automobile, indeed! A mere trifle! Nor does it require half the skill, half the strength, half the keenness of eye, to hold the motor on the road that it required to steer that bob-sled when once the snow had begun to roar beneath our runners, and especially to take it successfully around the sharp turn half way down the hill, with every boy leaning far over to the left as a perfect illustration of the centrifugal force we studied about in physics.

But even before that prep. school period there were bob-sleds scarcely less wonderful. The very first one of all was simply made, by putting the ropes of our large sled under the body of a second smaller one, borrowed for the purpose, and using the forward sled merely to steer by. Reaching financial affluence the following summer by strawberry picking in the hot sun, at two cents a basket, we were able the next winter to buy a second sled of our own, and a pivot bolt and four large washers from the blacksmith. Equipped with these, long before the first snow came we had trimmed a plank and made it fast to a high block on the rear sled, while it was fastened to a block on the forward sled by the pivot bolt, the nicely oiled washers preventing wear. Then a steering cleat for the feet was made fast far out on the forward runners, new ropes were surreptitiously cut from the family clothes-line – and we prayed for snow.

That was some bob-sled, too—or double runner, as they are called in certain sections! What matter if the blocks were not made any too fast, and on the first trip the plank wrenched off at the curve, spilling everybody into the drift? It only taught us better carpentering, by the experimental method. What matter if the plank was unpainted, and there were no running boards, and Frank Nicholl's bob-sled, which was "boughten," held two more passengers, and steered with a wheel? He couldn't control it half so well on the curve where Locust Street came into Main Street, and if you didn't hold the road you skidded into Kingman's fence and then your father had to pay for new palings? And then Frank's sled couldn't go any faster, either—or not *much* faster. The only reason why it went *any* faster was because it was a bit older and so the runners were worn more smooth! You were ready to stake your entire fortune on that assertion, or to prove it by honorable combat.

Since those far-off days, perhaps, you have acquired a motor, and once more experienced high speed on the open road—at much greater expense. But has it been half the fun? The only advantage the motor can claim is its ability to go both ways of the hill.

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WE USED TO TRAVEL SIXTY MILES AN HOUR AT THE VERY LEAST ON A TEN PASSENGER BOB-SLED, WITH BUCKIE BLAGDEN AT THE WHEEL

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HOW TO SNOWSHOE

By W. DUSTIN WHITE

ILLUSTRATED WITH PHOTOGRAPHS

Some of the Simple Points to Remember in Mastering the Art of Web-Footed Navigation

GIVEN a full-rigged, snow-worthy shoe, and the rankest novice may cruise the smooth, glistening seas of winter with little trouble. The bow of each shoe should be held to a straight-ahead course, and good care taken that the stern of the one does not o'erlap the hull of its mate. Difficulties do not arise until rough going is encountered. Such obstacles as rocks, logs, and sticks are easily negotiated if they appear above the surface, but when just underneath are liable to catch in the webbing or to throw the shoe on to one gunwale, which offers but little resistance on the soft snow. A hurried tack, either to the starboard or larboard quarter, might prove disastrous.

If the lashings slip, the toes of the helmsman may catch under the forward beam, and a sudden reverse of the motive power is almost sure to bury the stern of one shoe and precipitate the cargo on the back of the head and shoulders in the cold white snow. However, these difficulties do not bother the navigator that keeps his mind on the course and the shoes in perfect trim, fore and aft. But to drop the nautical terms.

Snowshoeing looks easy and, for that matter, it is easy, if you are out just for the sake of snowshoeing and can keep the mind constantly on the trail. The beginner's troubles come when his mind is diverted, as on a hunting trip, from the webs, which speedily get tangled up, and the forthcoming result is a catastrophe. What one has to learn is to handle the shoes instinctively and automatically, while the mind is occupied with something else. This is largely a matter of habit—a habit that can be acquired with a little practice, patience, and perseverance.

WHAT HAPPENS WHEN THE TAIL OF ONE SHOE CATCHES ON THE OTHER

The choice of a snowshoe is a subject for much discussion, for there are styles and kinds almost without number. If you want a shoe for

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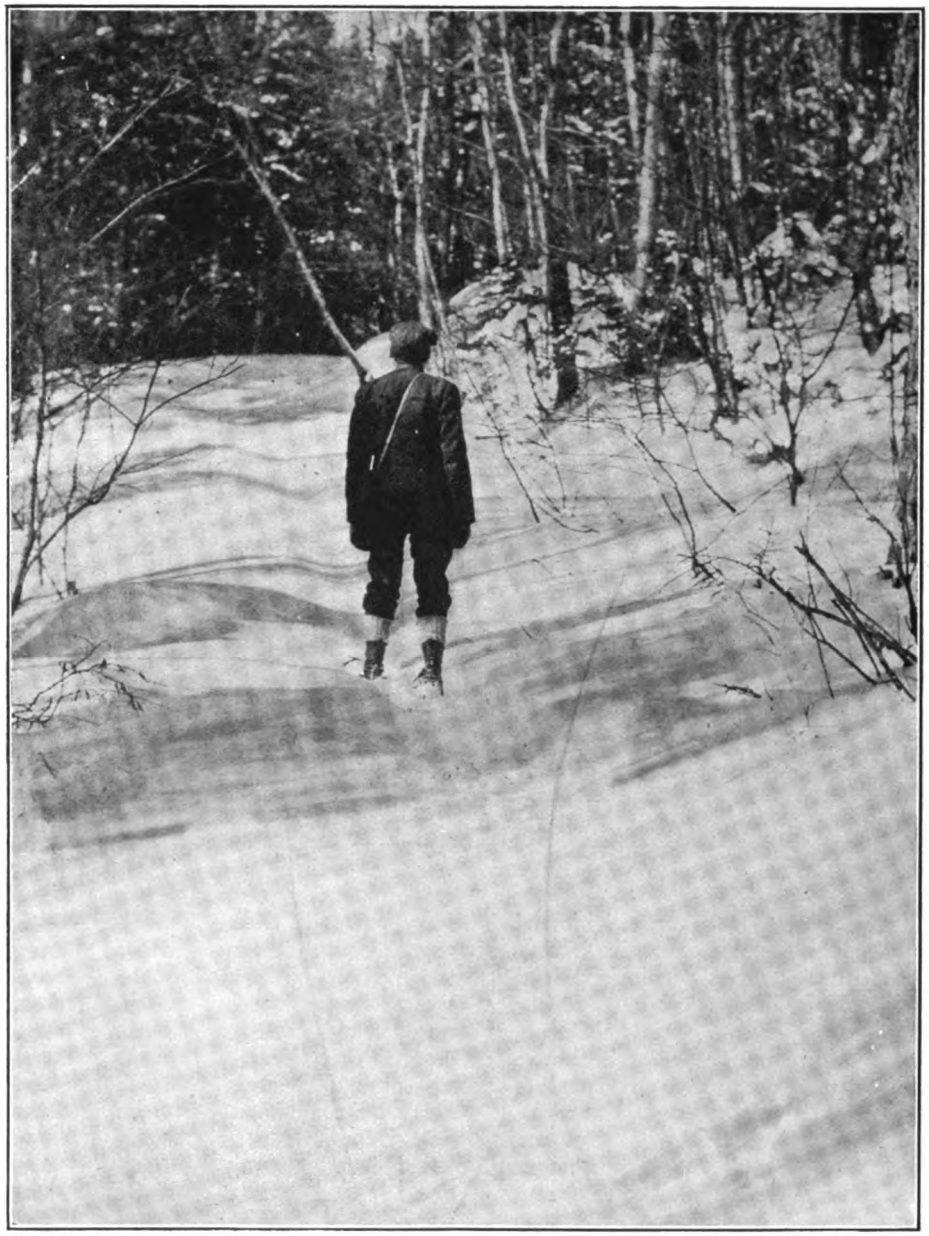

JUST CRUISE AROUND IN THE GREAT WHITE FOREST, STUDYING THE TRAILS AND ENJOYING YOURSELF

open, straight-ahead work, get one that is long and narrow. If you want one for rough, brushy places, get a short, broad model. If you want an all-around shoe, get one of medium length and medium breadth. The all-around shoe should turn up slightly at the point. The flat ones are better for uphill work, as they give a toe-hold and cling better, but when you turn and come down the toe is liable to run under the surface, especially if there is a little crust, tripping you and throwing you forward.

If you want a first-class shoe, go to

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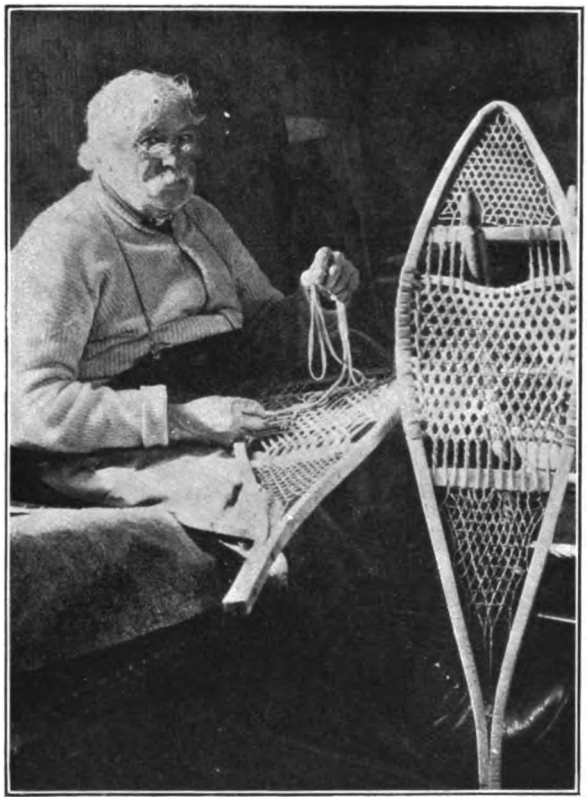

WILL MAKE YOU A PAIR THAT WILL BE OF THE BEST MATERIAL AND CONSTRUCTION

some old snowshoe-maker, tell him what you want a shoe for, and give him your preferences. He will make a pair that will be of the best material and construction. However, the commercial shoe, if you can find the size and style that suits you, will give the ordinary wearer lots of service. But this was to be an article on the wear and not the choice of snowshoes. Maybe you have a pair, anyway.

Moccasins are supposed to be the proper footgear to be worn with snowshoes, but I prefer a pair of leather-top, rubber hunting-shoes, without heels; first, because they are more likely to be waterproof than the average moccasin we buy; and second, because they will prove much more satisfactory when the trail comes out on a slippery logging road or highway, as it not infrequently does. These shoes should be large enough to permit the wear of at least two pairs of heavy woolen lumbermen's stockings (hand-knit if you can get them) over a light pair of cotton hose.

The snowshoe is attached to the foot either by snowshoe sandals or a pair of thongs. The sandal is a little slipper affair for the toe with a strap to buckle around the ankle. The thong is simply a strip of rawhide or wicking, preferably the latter, for the rawhide is much given to stretching in wet weather. There are several styles of sandals and several methods of tying the thongs. A very simple tie may be made by passing the ends of the thong down through the post-hole or eye-hole, on each side of the foot, bringing them up through the toe-hole. Now cross the thong in a single square knot on the toe, then tie the ends in a bow-knot around the ankle. Easy to tie and easy to take up if it stretches.

But if you want a more secure method: Bring the thong around the heel, forward along each side of the foot, pass the ends down through the post-holes on either side and up through the toe-hole. Make a double loop over the toe by passing each end of the thong up over and down through the post-hole on the other side. Again bring the ends up through the toe-hole and half hitch around the double toe-loop on each side of the foot. Then cross them over the instep, half hitch to the heel-loop on each side and tie in a bow-knot at the back of the heel.

The foot may be twisted out of either of these ties in case of a bad tumble. With the latter method, however, it is better to have a toe-loop woven into the shoe. It makes the tie much more simple. By proper maneuvering, the foot may be twisted out of this tie or twisted back in again. The principle of all ties and sandals is to bind the ball of the foot securely to the heavy cross-thong at the back of the toe-hole and when the foot

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is raised the shoe swings from this. Only the forward end of the shoe is raised, the tail dragging on the snow.

The first thing the beginner has to learn, after he has got a proper shoe and has it properly fastened on, is to swing the foot outward with the forward step just enough to clear the other ankle, and the second is to make each step long enough to take the wide part of the forward shoe past the end of the other. Observe these two things and all will go well as long as you can keep your mind on the walking. Many snowshoers get their first experience, however, while out for some purpose other than snowshoeing —hunting in a rabbit swamp, for instance. As soon as the game takes up the mind the shoes are neglected and trouble follows.

A SUDDEN REVERSE OF THE MOTIVE POWER IS ALMOST SURE TO BURY THE STERN OF ONE SHOE, AND PRECIPITATE THE CARGO ON THE BACK OF THE HEAD AND SHOULDER IN THE COLD, WHITE SNOW

. . . THE TOE IS LIABLE TO RUN UNDER THE SURFACE, ESPECIALLY IF THERE IS A LITTLE CRUST, TRIPPING YOU AND THROWING YOU FORWARD

My first intimate acquaintance with snowshoes was made in an April sugar bush, with a sap yoke across my shoulders and a brimming pail of the sweet liquid in either hand for ballast, which incidentally acted as an incentive and spurred me to my best work to avoid the certain deluge that followed a bad tumble. The snow was wet and coarse-grained—a melted crust—the kind that stretched the filler until each shoe resembled a basket and cut the meshes like a knife. It would have been hard, then, to have made me believe that I would ever enjoy snowshoeing.

When one is learning the art of snowshoeing he should take it very leisurely, study each step and become so thoroughly familiar with the shoes that they will seem a part of you, as does the canoe after you have ridden in it for a time. It is usually best to keep to the open,

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SCALE AN ICY PEAK AND VIEW THE WHITE, WINTRY LANDSCAPE

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smooth fields for the first hour's practice. Once you get in the woods you are liable to encounter obstacles. Logs, fallen trees, rocks, and such obstructions as appear above the surface may be negotiated, but there are always a certain amount of little stubs and bushes just underneath that catch in the webbing or tip the shoe to one side and let that down a couple of feet with a sudden drop. One will naturally throw out the other foot to catch the balance, forgetting that shoe, and there is almost no end to the tangle one finds himself in.

Watch the Turns

One of the most sudden tumbles you will get, however, will be when you forget yourself and step backwards. When making a turn one has to be careful not to let the tail of the inside shoe swing over on to the other, or there will be trouble when the other foot is started. In traveling through the thick, small growth woods you will find it difficult to handle the long shoes. The long tails are fouling every tree you pass or tangling with each other as you zigzag back and forth to get through. The bear paw, or tailless model, is the best for this kind of a place and is the ideal shoe for the rabbit-hunter.

When one starts on a real wilderness trip, a mountain climb, or a north woods cruise, he should be sure that the shoes are in good shape and also take plenty of extra thongs and strips of rawhide for repairs. An accident which would put even one of the shoes entirely out of commission might mean serious consequences for anyone if there lay five or six miles of snow, five or six feet deep all the way, between him and the nearest road or buildings.

An experience on Mount Lafayette forcibly impressed this on my mind a few years ago. We started up, the Cameraman and I, from the Profile House, leaving word with the caretaker there that we would not be back that way, but would go down another ridge toward Twin Mountain. The trail up through the woods was good, although the snow was over five feet deep wherever we measured it. Above timber it was so cold that we did not dare to face the biting gale as we would have to in going down the other side. So we left the shoes near the tree line and went to the top on the ice creepers. It was a heedless thing to do, I'll admit, and when we returned in a snow squall no shoes were to be found. It began to look as though some place near the timber line on that mountain was to be our final resting-place, for it was four miles back down and the distance we could cover through six feet of snow before exhaustion overcame us would have been a matter of feet, or maybe yards. And we had burned all our bridges behind us when we started.

Well, we found the shoes, just at the psychological moment, but during those ten minutes of hunting I had time to realize what it meant to be without good, substantial shoes in such a place. Of course anyone out for a near-home tramp or moonlight stroll need not be so particular. With him a breakdown would mean nothing more serious than a half mile of wallowing to the nearest beaten path.

What a world the snowshoer has at his command! Take the train to some north-woods station this winter, load a toboggan with camping equipment, and drag it back to a log cabin on some woodland lake. Take an ice fishing outfit and race across the wind-swept lake when the flying signals call you from one end to the other. Take the little hound along and tramp through the rabbit swamps, gun in hand, and listen to the thrilling music. Scale an icy peak and view the white, wintry landscape while you rub your tingling ears. Hunt up a deer-yard and run down its inhabitants with the camera. Or just cruise around the great white forest, studying the trails and enjoying yourself from the time the first rosy streaks of dawn glisten on the snow until the long afternoon shadows fade away and you gather with the pals around the big fire in the snug little camp. Then decide what you think of Web-footed Navigation.

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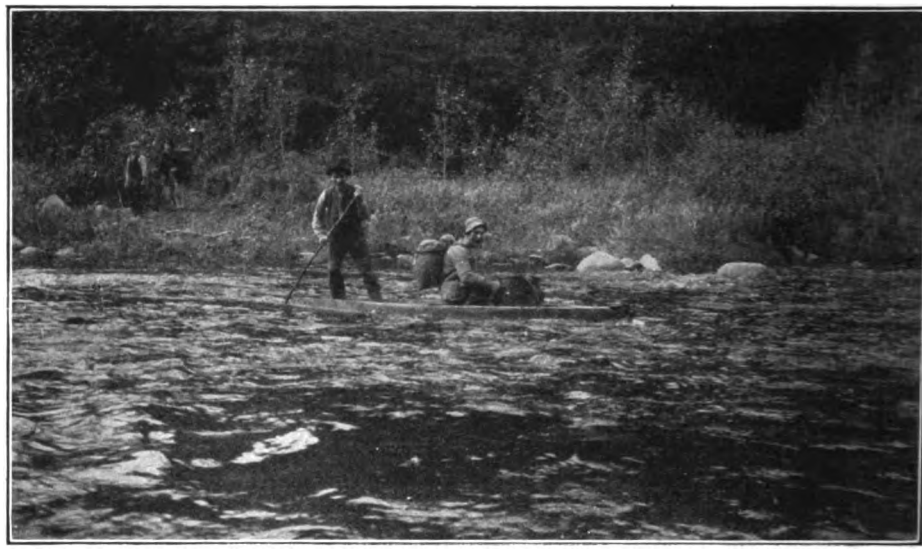

A PRIMITIVE FERRY

CLIMBING FOR CARIBOU

By EDWARD BRECK

ILLUSTRATED WITH PHOTOGRAPHS

Hard Work the Price That a Man Must Pay for the Big Deer of Nova Scotia

THAT marvelous Parisian German Jew, Heinrich Heine, once wrote the German equivalent of the following lines:

Whosoe'er the first time loves,
E'en though hopeless, is a god.
He who loves again, and hopeless,
Treads a very fool the sod.

I would like to paraphrase this verse and say that the man who penetrates to the caribou grounds of Cape Breton by the way of the Northwest Margaree River *once* may claim to be something of a hero; but the man who tried it the second time would be a fit subject for an alienist. There are caribou on Cape Breton. I am going to tell you about one or two that we saw and describe how we hunted, plus the experiences of my friends. I may not always stick strictly to continuity of events, but what you want is a real idea of how the thing is done.

I note that in OUTING'S announcement of this paper the genial editor suggested that I had never hunted caribou before, but I would like to state that this is inconsistent with the history of the United States of America, though my last hunt after the American reindeer was many years ago.

My good friend, Chief Game Commissioner Knight of Nova Scotia, was familiar with the caribou grounds of Victoria, one of the only two counties where there is now an open season for caribou, going in from Ingonish on the eastern coast. But he was interested in discovering a way to reach the country from the west side of the island, and therefore placed me in communication with Game Warden Ross of N. E. Margaree, a settlement on the salmon-angling

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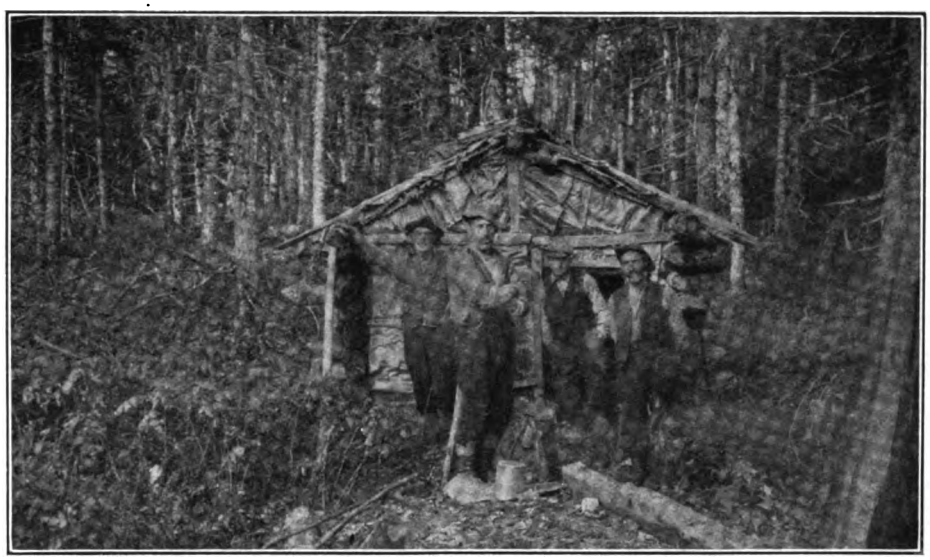

THE SECOND-FORK CABIN

branch of that beautiful river, who held out the most roseate promises in regard to game, country, and guides. It was therefore with high hopes that I journeyed to the little mining town of Inverness, by way of the Dominion Atlantic and Intercolonial lines of railway, the last stage being over a hopelessly slow stretch of rails owned by the proprietors of the coal mines round Inverness, which is a dreary, dirty little place with fifth-rate inns and much mud. Of course, it is a prohibition town, no doubt accounting for the number of drunken and half-drunken persons I saw there. But the townspeople of the better sort are the kindest in the world, like all the inhabitants of Cape Breton whom I met, agreeable, hospitable, and unpretentious.

I am glad I went to the caribou grounds the wrong way, for I thus discovered a paradise, namely, the valley of the Margaree, especially from the forks up the N.E. Branch, which, it would seem, must be the best salmon river in Nova Scotia, to say nothing of sea-trout. In any case handsome it is, running serenely through the broad green valley, dotted with splendid elms and surrounded by high hills, almost mountains. This branch has its rise not in any lake, but is the agglomeration of countless little brooks that dash down from the springs of the barrens above, and the water is as clear as crystal. No wonder the salmon like it.

And how canny the salmon anglers are! Hardly a word do you hear about the Margaree nowadays. The best pools are quietly taken up by a few astute fishermen from outside who come every year. As for the sea-trout, we all know that they or any other small fish are despised by the salmon-anglers. As for my single self, I am going up there next June, and I am going to stop with the postmistress, Mrs. Ross, who keeps a deliciously clean little inn, and I am going to have the time of my life up that N.E. Branch, landing sea-trout of two to six pounds in weight! I say nothing about the salmon; that's of course.

But to return to our caribou. It is over twenty miles from Inverness to Mrs. Ross's, and thence farther up the valley eleven miles to Kingross, represented, so far as I could see, by three houses, one of them, the "farthest north," being inhabited by Dan Murray, the one licensed guide of all that region. But Dan was not at home, as the warden had got things a bit mixed and we were not expected until Monday, this being Saturday.

Inadvertently I mentioned starting on the morrow, whereupon Mrs. Murray

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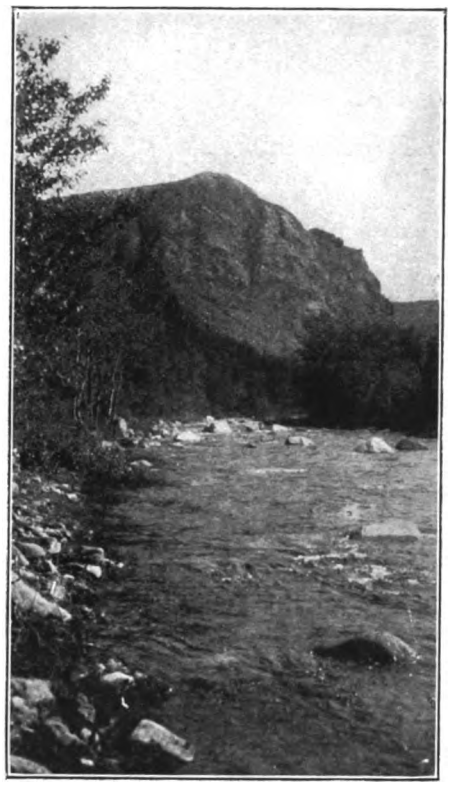
gave me a look that would have killed a duck at fifty yards and said something about the people round about being good Christians, and she hoped she never would see her man goin' off with a pack on his back of a Sabbath, no, she certainly hoped she never would live to see



"THAT'S WHERE WE GO UP"

that! And the few natives who had gathered round to have a look at the hardy caribou-hunter shook their heads ominously.

Of course I hastened to assure Mrs. Murray that I had not stopped to think that to-morrow was Sunday, but, though she softened somewhat, I got the distinct impression that I was "in bad" with the guid wife.

Monday, early, we again put in an appearance at Kingross, and there was at once a great powwow concerning the provisions and other impedimenta, for I had brought three pack-baskets full, a sleeping-bag, and other such stuff, having no idea in the world of the journey ahead of me. In the lake country of Nova Scotia we are not accustomed to count the pounds very carefully, as the portages are short and one doesn't mind a heavy load for a short distance on the level. But these strapping Highlanders shook their heads to such an extent that I began to be frightened, with the result that we started with all the heavy stuff, such as canned goods, left behind, including my whole extra clothing outfit except one suit of underwear and a couple of handkerchiefs. My sole foot-covering consisted of a pair of hunting-shoes, which, though excellent in their way, were a trifle heavy for the kind of work before us.

Finally we made our start up the picturesque valley, which narrows here, the river plunging down at a great rate over the stones.

I have never felt so much like the head of an African safari in my life, for no fewer than five men accompanied me, each with a pack on his back. There was Dan himself, who complained of rheumatism and carried a rather light burden, shedding a lurid light on his make-up. Then came "Little Dan" (Donald) Ross and his son Willie, a husky boy with a good outlook as a future guide, and big Neil McLeod, who, with a claymore in his hand and the kilts of his ancestors flying in the wind, might have frightened a Lowlander into fits in the Forty-Five, but who was the mildest, most good-natured chap in the world, and a fellow of infinite jest. Demure Torquil Stewart was the last.

The first two hours were consumed in ascending the valley, often wading the shores and twice crossing the stream in primitive board skiffs. Much of the walking was over rocks, slippery with wet moss, and, with the packs on our backs, it was no gentle saunter. My shoes were not new and were worn rather smooth, and it required some skill to keep my balance. Is there anything more disconcerting or, for the matter of that, more severely trying to muscles and temper, than to slip and lose one's balance while carrying a heavy pack? The jolting strain that invariably follows takes it out of one more than a couple of miles of going on the level.

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I was not exactly soft, but I had been living for a fortnight in those unwholesome things called houses, and this start was not soothing to my nerves. I had on my back my sleeping-bag, with some other things inside, and my knapsack on top of that, with a camera slung over my shoulder and my .35 in my hands. It might have weighed altogether between forty-five and fifty pounds. The others, except Dan, carried as much or more.

At last we left the valley of the main river, after Dan had pointed out a bold bluff towering half a mile right above us, with the remark that "There's where we go up!" Following along a little brook for a mile or so, we at last began to go upwards. And believe me, my friends, it was upwards! Narrower and steeper and wetter grew the gorge until it was a steep gulch with a brook trickling down or oozing out of it. We were a good deal over an hour getting up the last steep incline, often so precipitous that both hands were needed to pull one's self up. And how slippery the moss was, and how my back ached, and how I sweated! We rested every fifty yards or less, for often it was a sheer upward climb. The others were palpably tired—that was my only consolation—and there was very little conversation as we sat puffing during the rests. As for myself, I must confess that my 135 pounds were very nearly unequal to the task of my pack, and I went up that mountain gorge on my nerve alone.

SCANNING THE COUNTRY

MY BARREN BIVOUAC

About half-way up, during one of the pauses, I took off my knapsack, which rested badly on the top of my pack, intending to tie it on more securely. But when we were ready to start again I missed the sack, and a glance showed me that little Donald Ross had quietly slung it over his shoulder. For a moment pride struggled with common sense, finally to succumb. Little Dan wobbled sadly up the incline with that top-heavy knapsack falling one way and then the other, but never complaining. When at last we

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reached the summit I thanked him and demanded the sack back. To my surprise he took it off and passed it over with a distinct sigh of relief. Dan doubtless had all he cared to lug already, but fancy one of my Annapolis County boys giving up anything in the pack line to his sportsman!

Nevertheless, little Dan is no "quitter"; quite the contrary. He is merely inexperienced in the art of guiding, as are the rest. I speedily found that, if I wanted anything, I had to ask for it. The anticipation of an employer's needs was unknown to these men, though they had the kindest hearts in the world. It was amusing to see five husky men standing round and nobody with any idea what to do; and it was not until the last of the trip that each man took up his allotted task without being told to do it. A lean-to tent, to my mind the only tent in any weather but the coldest of winter, they had never seen, but mine was appreciated when the big camp-fire roared before it on a coolish evening.

Once upon the high plateau that extends pretty nearly all over the northern part of the interior of Cape Breton, we began to notice signs of game, hitherto only a "partridge" or two being seen. Especially were evidences of foxes very common, and hawks, particularly Cooper's, flew about everywhere. The island is separated from the rest of Nova Scotia only by a mile or so of water, and yet the differences in the fauna are marked. That ubiquitous, destructive, good-for-nothing, delightfully awkward and curious beast, the porcupine, is unknown on Cape Breton, and so, too, are the skunk and wildcat. On the other hand, the marten and Canada lynx (one *lynk,* two *lynks,* is the way the woodsmen put it), unknown in Nova Scotia, are common here. The moose they have killed off, and the bear are few. Worth mentioning is a (to me at least) new name for the already much-named Canada jay, which the guides called the "carron jay," a designation for which they could give no reason. Very likely *carrion* is meant.

That first night I shall not soon forget. The men, being used to crawling into their stove-heated trapping cabins, had no bedding, the result being that all hands spent the cold night hours in keeping up the big fire, often using the axe, which is not conducive to gentle slumber. They also talked and sang, and, judging from certain significant noises, had a bite to eat now and then. It apparently never occurred to them that their employer might possibly care for a wink or two of sleep.

I wouldn't have minded it so much if the concert and conversation had been

A KILLING CLIMB

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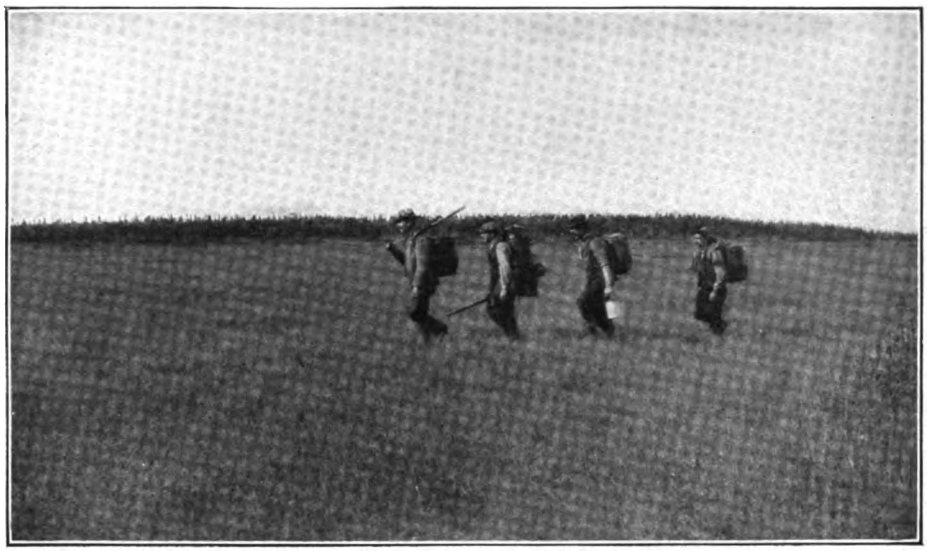

A CARIBOU ANABASIS

carried on in English, but among themselves these second and third generation Highlanders invariably speak Gaelic, and my brain got so interested, in spite of myself, in trying to make out, from the few Gaelic words I knew, what they were saying, that slumber quite fled from me. Under October 7th I read in my notebook: "Hellova night. Dan champion talker; Neil champion singer. For a few minutes somebody must have slept, for he snored like the trombones in the introduction to the third act of 'Lohengrin'."

Incidentally during this hunt I was reminded forcibly of the difference between the Lowland and Highland Scotch and their languages. The first day I tried a little "broad" Scotch that I had picked up from professional golf-teachers on Dan, but he stared for a moment and then remarked, "Ah, that will be Lowland talk, I think." When these Highlanders use English they speak it like you or me.

No wonder a very sleepy band of men started on the trail next morning. I had flattered myself that our pedestrian trials were over, but I was mistaken, for the walking up there was bad. All my life long I have longed to wander in a genuine virgin, totally unlumbered forest, and this wish was now gratified, though my esthetic sense was not. No giant pines and spruces here, though there were trees enough of this kind, the tallest being hardly over fifty feet in height. For firewood we felled a couple of birches, and Dan showed me the rings in the wood, which became so thick and numerous near the bark that it was impossible to count them.

Dan opined that many of these spruces and white birches were hundreds of years old, and declared that, to his knowledge, one of them on this plateau will not grow over an inch a year. The reasons for this are that the soil is too shallow above the pre-Cambrian bed-rock and the winds buffet the woods very grievously. As a result the thick woods are quite covered with windfalls ("blow-downs," the natives call them), and with scrub growth of every kind, the worst being the firs, spruces and the maples, the latter sending out their tough branches horizontally along the ground like snakes turned to wood, as if with the intention of tripping the feet of the unwary traveler.

Add to this condition of things that, since the country has never been visited by lumbermen (these fell gentry destroy only the beautiful forests!), there are no tote-roads or paths of any kind except those of the caribou from barren to bar-

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MR. KNIGHT'S METHOD OF TRAVEL

ren, and that the barrens, or muskegs, are mostly covered with soft moss into which the feet sink over the ankles and often to the knees, and it is easy to see that there is little rest for the weary in this God-forsaken region. More than that, the many brooks all rise here and, in descending to the plains, form deep gulches that must be crossed, so that progression is apt to be a good deal up and down.

At this time of year the caribou are in the green woods, and the natives do not hunt them until snow comes and the animals come out on the barrens to feed on the white moss. In October practically the only way to hunt them is to intercept them while using their paths from one piece of woods to another across the barrens. Nevertheless, it seemed proper to stick to the barrens, since the woods were so thick as to make still-hunting next to impossible, and so we made directly for the great Cape North Barren, one of the most extensive on the island, in the hope that there, if anywhere at this season, we should see caribou. It was a three days' hike thither, and the only party that reached there before me had left its sentiments written on a tree at Dan's camp, where we spent the second night. It was in the form of a "poem," and ran thus:

> "We whose names are here appended,
> Our weary way to the barrens wended.
> We damn well wish we were back home,
> This cursed trail ne'er more to roam!"

Dan's cabins were of logs covered with birch bark, which is very plentiful here, there having been no canoes to build.

It was a relief when at last Dan and I were able to start out without being weighted down with packs, and we covered the three miles from the last camp to the big barren in short order. There is always a measure of excitement on reaching a barren or other clearing, as there may be caribou on it. The method is to approach from leeward and scan the country with a glass from the last cover on the edge. Tracks we found, but nothing very fresh, and even the great barren failed to show us a moving thing, though we wandered over it for miles, and had a clear view for a long distance in every direction. Even the hills on the coast, both east and west, were visible. We therefore "boiled the kettle" while Dan regaled me with his choicest whoppers, in which the bull cari-

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bou were always killed and never bore less than thirty or forty points.

For the afternoon Dan had reserved a part of the barren that stretched away toward the north with a gentle dip that concealed it from the highest knoll when we had scanned the region. At the bottom of this slope was a grassy valley spotted with small, tarnlike ponds, the only vegetation being clumps of scrub growth.

To within a quarter of a mile from these tarns ran a tract of scrub spruces, so low that we were obliged to stoop in order to get any cover. We would advance through this for fifty yards or less and then pause to scrutinize the valley in front. During one of these pauses came our first thrill. Dan had scarcely taken up the glass when he exclaimed:

"I see two lyin' down by that bunch o' scrub! They're bulls! Look!" And he handed me the glass.

Sure enough, I could distinctly see two brilliant spots of white, which Dan said were the necks of the caribou. "Come!" he said in a low voice, and we started off toward the quarry, moving swiftly through the scrub with a low stoop, often, indeed, on hands and knees, where the cover was sparse. Every once in a while we would stop and examine the animals through the glass, and it seemed to me that they moved about somewhat, but Dan said they were only moving their heads. There were still at least a hundred yards to cover before we could think of shooting, and we gradually made about this distance with the greatest care.

"Can't you see their horns?" inquired Dan anxiously. I had to confess my inability to distinguish any antlers, though we were not within shot, but it seemed to me that there were more than two caribou, or at least white spots.

"When we fire, Doctor, you take the right-hand one, and I'll take the left!" whispered Dan. It had been decided that Dan should also kill a bull if he had the chance, since he was entitled to one, and could use the smoked meat later while trapping, thus saving a strenuous lug of meat up the mountain.

We gained another twenty or thirty yards, and it appeared to me that, if there were any antlers worth having, they ought now to be in evidence. Suddenly I whispered:

"Look here, Dan, there are five of them, whatever they are!"

The Winged Caribou

Dan took a careful look with the glass. I could feel his shoulder tremble slightly as it touched mine, and I remember warming to him for this great interest, which amounted to real sporting excitement. I had my rifle cocked and ready to fire if the caribou jumped, and I wondered that Dan took such a long look. I saw him scowl, then look again very intently. At last he let the glass fall and gazed at me with a curious expression on his face.

"Yes, you're right!" he said in a voice of mourning. "There's five of 'em, all right, but they're wild geese!"

It was one of those moments when conflicting emotions come together like the warring currents where three streams run into one. But disappointment and disgust soon gave way to a sense of the ridiculous, and we both burst out laughing over this very literal wild-goose chase. The geese heard our guffaws and started to walk away in a very dignified manner.

As for Dan and me, we returned to camp in a rather crestfallen state of mind.

Next day I proceeded to put a plan into operation from which I expected results, if results were obtainable at that season. It was to take my sleeping-bag and spend the night on the Cape North Barren, and thus be on hand if the caribou came out either at eve or early morning, or crossed at those times on their way to other parts of the woods. Accordingly Dan and Donald helped me take my stuff to the barren, and left me there in time to get back to their camp before nightfall. I spread the bag in a clump of scrub spruces, with a light tarpaulin spread over it on two sticks, and collected dry stuff enough for a little fire, the kettle having been filled at a brook on our way to the barren.

The guides were loth to leave me so, but I was but carrying out an old theory

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—that the best still-hunting party consists of one man, the next best of two, and so forth. A single man's attention is not taken up by his companion, so that he gives it all to the matter in hand. He therefore hears and sees more, and makes far less noise than if in company. After taking a turn round the highest knoll on the barren, and convincing myself that nothing living bigger than a hare was within miles of me, I made myself a cup of cocoa, ate my piece of bread and butter and cold bacon, and turned in.

What a wondrous night that was! The moon was nearly full, and there were stars, too, and the temperature fell to far below the freezing point. Deep silence brooded over the face of the earth, made still deeper by the occasional hoot of an owl or the bark of a fox. Once a hare nearly ran over my bed, and scurried off in a panic when it discovered my whereabouts. A heavy dew fell and froze on my bedding, so that when, just before daybreak, I crawled out of my bag, I had to be very careful not to break the canvas, which was stiff and white with hoarfrost. The water in kettle and cup was frozen solid, and it was shivery work until I got a fire going and a cup of hot coffee "next my heart." I was on the barren in time to see the sun come up in splendor and drench the earth with the melted frost.

By the time Dan arrived I had convinced myself that nary caribou was within scouting distance, and we turned sadly back toward camp. But there was still a good chance left, for on the way lay several smaller barrens linked by strips of second-growth woods, and these we followed, finding some fresh tracks on the old caribou paths. We also found something else which was both significant and ominous, namely, the remains of a caribou snare, consisting of two uprights, one on each side of the path, at a point where the animals were practically sure to pass through, a big tree which had evidently served as a spring-pole, and a kind of paddle-shaped piece of hewn wood about thirty inches long, with a small, square hole in it. This was designed for the doomed beast to place its feet upon, the heavy noose of rope then jerking it up to a position in which it was quite helpless, a more or less lingering death being the result.

The guides said there had been no snaring for many years, but these remnants did not look so very old. There used to be vast herds of caribou in this region. Possibly the art of snaring has had something to do with their diminution. *Absit omen!*

Pays to Know that Country

Dan asserted that he had often approached caribou from the windward, but Dan is given to spinning yarns, and I took notice that on this occasion, when he was really anxious to score, we circled the first muskeg very carefully until we could cross near a likely looking second-growth "neck o' woods" that reached out into the bog like a point, without throwing our scent in that direction. There was an unusual amount of small growth on the barren, which also undulated in surface more than most others, and Dan never moved farther than thirty yards without subjecting the landscape to a long and thorough scrutiny with the glass, which he would then pass to me with the request to do likewise. We had been following, for some time since we left the big barren, the tracks of a small herd, among which were those of a good-sized bull, when suddenly the spoor turned off toward the left down a swale. Here was where the guide's knowledge of the country came in, as it usually does, with telling effect.

"They'll follow that for a mile and then turn back to the Third Branch barren," he said. "That's right over there. If we are not too late we may meet them. The bull has been following the cows, and if he gets up to 'em they may go slower or stop entirely. Come on fast now." And he set a quick pace across the narrow neck o' woods that might be masking our quarry.

A sacrifice to Diana and a candle to Saint Hubert! Luck was with us, for, as we paused in the underbrush on the barren's edge, we made out the brown-and-white figures of half a dozen woodland caribou on the other side, about two hundred yards distant. Dan handed the glass to me.

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"Them ain't no geese this time!" he whispered. "I make out one good bull anyway."

I examined the little herd with beating heart (shall I ever get blasé when game appears?) and agreed that there was a shootable bull over there, though perhaps no record head. Carefully choosing our way, we started to creep across the barren toward the group which was feeding quietly. The scrub growth, the wind in our faces, and the undulations of the ground surface made the stalk a fairly easy one, and at last I maneuvered myself into a position from which, lying nearly prone with a rest over a dead spruce stump, I covered the herd at less than one hundred yards. As there was only one large bull Dan decided not to fire, but held himself ready to do so if the bull showed signs of getting away, a thing hardly possible at that distance with a steady rest for the powerful thirty-five.

As usual, a great calm came over me as I aimed, and at the mighty bang the bull reared slightly, then swayed and fell on his side, only to struggle to his feet. It was easy to see that he was hard hit, but every second of suffering is agony for a true sportsman, and a second shot put the great deer down for good. The hunt was over.

I lost five pounds on that trip. Next time I shall follow Mr Knight's advice and go in from the eastern side, for I feel a good deal like a friend who was getting bald and who dreaded to go to the barber's. "Every time I go," he said, "I lose a hair, and I can't afford that!"

PREVENTION AND CURE OF SNOW BLINDNESS

SNOW blindness is an inflammation of the eye due to the reflection of intense light from the snow. There is blindness, flowing of tears, the whites of the eyes are bloodshot, the lids swollen, often a pus discharging from the eyes which is highly contagious and when brought into contact with healthy eyes is liable to transfer the disease.

Treatment of Snow Blindness:

1. Apply cold cloths which have been on ice or wetted in cold water. Do this for half an hour three times a day, changing the cloths as they become warm.

2. Several times a day hold the eyelids open when lying down and pour into them a stream of cooled water which has first been boiled.

3. At night smear the lids and eyelashes with some pure salve to prevent them gluing together while asleep.

Prevention of Snow Blindness:

The natives of the Far North use eye-coverings which entirely shut out the light except a narrow slit through which they see. Some use smoked glass goggles while still others smear their faces with grease and lampblack to break the glare. It is common among mountain climbers to use actors' grease paint for this purpose. In the Winnipeg region of Canada there are used "horse hair" goggles which are superior to any protection to the eyes in snow work. They are made entirely of hair woven in a loose mesh, convex over the eyes. I would advise anyone traveling in the North to provide himself with them in preference to glass, which is coated with frost at every change of temperature, is always cold to the face, and is liable to be broken.

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THE FOUNTAIN OF YOUTH

By CHARLES TENNEY JACKSON

WEB-FOOTED BEES AND SWAMP ANGELS

CHAPTER VIII

The Waterhouse Boys

WE awoke to another cool, bright, but treacherous spring morning. The sun shone through the chinks of the wet hut and the mocking-birds sang in the swamp maples, while the wide-stretching lake was blue and dimpling beyond the line of battered driftage hemming us in. Our canoe had come through safely on its perch on the big log. We passed a leisurely morning rubbing our stiff bones and drying clothes. And here, in this lonely camp, there came an end to the adventures of Lord Teche.

"I do hate to kill that chicken," murmured Hen, "but this morning I feel like fried chicken. Anyhow, we'd lose him if we tried to carry him much farther."

So a few crocodile tears, and then fried chicken. We had knocked about for eight days with that bayou rooster, and this was the first camp where we had time for sad but fitting rites. Besides, we were afraid the owners of the shack would return, and you all know it is not well to bring chicken and a colored brother into too immediate juxtaposition.

After breakfast we waded to the pirogue, turned it over a log to drain, then waded back and carried our stuff out to the fringe of drift logs. It looked like another puffy day on the lake and we were anxious to get off. Ahead of us somewhere was Lake Dotreve, which the swampers had assured us was a bad bit of water in the Red and Atchafalaya headrises of May. We got off at noon, leaving a note of thanks on the table for our unknown hosts.

"But the chances are," said Hen, "the niggers can't read and will think someone has placed a hoodoo on their camp. We'll leave a more intelligible message."

So we made a present of some canned corn and stuff to the absentees, selecting, of course, some things we didn't want ourselves, which is the soul of all true philanthropy. Also we cooked a batch of sour dough and left half of it—the burned ones, that is, for our reflector baker just naturally would burn the lower row of biscuits.

It was three o'clock on the first of May when we paddled about the last great spur of submerged cypress butts into Lake Dotreve. Its blue shore line of forest ten miles away was utterly lonely and uninhabited as far as we could see. Already a bad sea was kicking up with the freshing northwester. After an hour of skirting the south shore, where we had to catch the whitecaps broadside on, we made out what appeared to be a house away to the west. Hen turned the *Bantayan* out straight for it, and the course took us a mile and a half off shore. We figured to cross the bend before the lake roughened too much for the pirogue. But presently a wave laced us fore and aft, and I heard the rush of the water under our luggage. It didn't look good, and I freely said so.

While Hen held her on in the seas, I bailed cautiously—as much as a man can bail a loaded craft when he cannot in the least turn in his seat, nor shift his weight right or left, without capsizing her instantly. I merely could spread my knees and snatch a bit of water with a tin cup.

But another wave undid all my work—and then another. The *Bantayan* was wallowing heavily. The nasty seas

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would not allow her to get her head up, as a canoe might have done. We held a hasty council.

"It'll be no easy trick to turn and run for the shore, but it's the best bet," Hen muttered. "Watch for the sixth swell—it's always the biggest. Then dig sharp about to port—*now!*"

We ripped the blades in right after the run of the water, and the pirogue got her tail into the seas before they could slap her. But that retreat back to the swamp shore was the most ticklish bit of pirogue running I have ever had. The waves raced past us level with the tiny coaming, so brimming level that when I saw them under my elbows I simply stopped breathing and waited. The *Bantayan* would drop to the bottom like a plummet if once she filled, and our chance of swimming that mile of yellow, angry flood sweeping the lake was slim, to say nothing of the miles of impassable swamp between us and the back levees of the Teche plantations.

I never was happier in my life than when the water-logged *Bantayan* crept slowly up to the line of wave-splashed trees, found a hole, and sneaked in. We fetched up behind a lily-bank and sat there watching the lake ahead. The gale blew up niftily in half an hour. The pirogue was lifted on the long undulations running under the lily-bank, which creaked musically in its waxy green leaves and bulbs.

The water was beyond sounding depth here for our paddles. Again we began to wish we had stuck to our safe refuge on False Point Lake. As the lilies packed tighter we began to speculate on the chance of a night in the jam. There was not even a tree near us big enough to stand on.

But as dark fell the seas began to run down. By seven I advised making a run for the point where we had seen the house, and after fighting through the lily jam and drift, we paddled on, and an hour later, in the shimmer of a young moon, we drew up to the first land we had seen in nine days over beyond the Grand Lake swamps. It was a neck of marshy, muddy soil running down from a road where stood the little house we had seen. A hasty camp was made, and at the house, which proved to be a forlorn store, we learned that this was Dotreve Landing and the head of the lake. The Cajun keeper was much amazed to be told we had paddled from Point Camille in that thirteen-foot pirogue. He shook his head—I doubt if he believes it yet.

The next day, Sunday, we loafed and cooked. Our rubber cloth on which the blankets were laid in the tent lay in ground so soft that the water gathered under us and made a bubbly sort of bed, but we had not minded. What we minded most was that the few inhabitants of Dotreve Landing said we could not possibly get up farther on the chain of lakes.

All "hell and high water" was out above, and, what was worse, none of them seemed to have any definite idea of the numberless channels that poured into Lake Dotreve from the Red and Atchafalaya rivers. But they were mighty sure that our pirogue could not live in any of them—it wasn't any use of talking, a man simply couldn't paddle up Bayou La Romp or Bayou L'Embarrass! And if he could, where would he get to? There wasn't a house from here to Butte La Rose, where the Waterhouse boys kept the bees, and that must be fifty miles.

Hen and I discussed this pessimism over our Sunday dinner. And by a chance, while Hen was off after blackberries later, I happened to glance lakeward, and saw a launch pounding up to the plank walk beyond the store. I raced down and found it was the *Dewdrop,* and she had come to bring some discharged men from a dredge boat up in the Butte La Rose country. A cheerful young engineer, Parmalee, was in charge, and it took no time for Parmalee to invite us to go back with him. The way I got Hen out of the blackberry patch and to work knocking down the tent and piling stuff into the *Bantayan* was a caution.

Parmalee wanted to get back and across the bad water before night. So while the *Dewdrop* chugged across Lake Dotreve, into Bayou Bentois, then Round Lake, all lonely and aswirl with sullen water, we "made supper," as the Cajuns

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say. And when we struck Bayou L'Embarrass (*Lombrass,* they pronounce it), we agreed with the natives for once. We couldn't have navigated that rush of flood through the crooked, narrow channel by any sort of means. It was a twenty-five mile pull of terrific water, sometimes one hundred feet deep and not more than that wide. The stout little *Dewdrop* at one bend was whirled completely around by an eddy, and then shook her stubby head and tore into the yellow flood like a bulldog. And all the time young Parmalee laughed with the light of battle in his eye.

We made Long Lake and Bayou La Romp more easily. Up here the flooded forests changed character. We saw no more moss-hung oak and cypress, but willows, gum, cottonwood, and maples much like the Mississippi above the delta country.

Parmalee, the launch engineer, had the usual incredulity when we explained our presence up the Atchafalaya lakes by saying we were after "pleasure." Honestly, we had no more explicit reason to give anyone!

"I swanny," said he, "I don't know what to do with you. Nobody ever come runnin' into a headrise of these rivers for pleasure—to say nothing of coming in that crazy coffin of yours. I don't reckon you'd mind if I put you off at the head of La Romp. You can go hang out with the Waterhouse boys."

Hen and I didn't mind anything. One place to go was as good as another. At least we had had a cheerful knocking around for the past ten weeks on that very principle. So at dark around a flooded point, where the Grand River rushes out of the Atchafalaya and gives birth to another twisting chain of lakes ere it joins it again just above salt water, we were put ashore on a floating platform. Parmalee yelled cheerfully to someone coming along the planks with a lantern: "Hey, Loyd, take care of these two guys, will you?" and then the *Dewdrop* was whirled off in the flood, leaving us to the mercy of the strangers' hospitality.

We had it to the full. Two brown-skinned, hearty young fellows grabbed our duffle and got it above the reach of the hungry current. They asked us a few questions and then set to work raising our tent on the only spot of land still out of water.

"If this blamed crevasse drowns you off of here, we'll stick you in with Len's goats," they said cheerfully. "Sorry to say our house is full. One of the boys just got married!"

We as cheerfully said we were game—goats included. But the next day we changed camp when the rising flood reached us. And the Waterhouse boys had a time dislodging the goats from their coop to pile our luggage in. Meantime we camped on Len's galleries and visited with the family, who were accepting the situation with good grace. They were accustomed to the unruly Atchafalaya's ways. Len said he was "going to write to the Government and give 'em hell because they didn't get busy and take care of the floods."

Len was what his brothers called a "comical cuss." He had been a storekeeper until he broke up at it. Then he moved into his store, and lived a year eating up the stock that he couldn't sell, after which he went to raising truck and running a "bush-cat line."

"Fine garden I got when the river isn't over it. But when it is I don't have to hoe it, so it's a good thing after all. And when the flood goes down the goats take what's left, so I don't have to worry much about gardening, anyhow!"

For three days we lounged with Len on his gallery and went to help run his catlines tied to bushes in the flooded woods. We took off some forty-pound catfish, and Len was in high feather. Now, he announced, we would have a *cou'bouillon,* and he would sell the rest of his fish to the trade boat and get some smoking tobacco. Back of his house was a most picturesque tangle of crepe myrtle, alpha bush, jessamine, and honeysuckle all woven together over his forlorn bee-hives on their crazy stilts above the water.

"Even the durn bees got to raise webfeet in this country," said he, "but yet I like it." Then he gave us some advice about the "quick water" of Grand River when we at last decided to drift on. "And if that cypress tub o' yourn goes

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down, climb a tree and yell for help; and when anybody picks you up, come right back here and settle. Room for all of us right here, raising bees—and you boys can each marry a swamp angel!"

We promised him we would.

CHAPTER IX

Adrift with the Floating Gardens

GRAND RIVER grew more wild and beautiful all that day's dash with the current, narrower, swifter, over its banks and surging the overhanging branches of the trees along with it so that the shores were a continual motion and glitter of kaleidoscopic green and gray—cypress and oak in the background, with before them the young willow and hackberry. We saw no one from Waterhouse's to Bayou Plaquemine, where we encountered a negro pirogue hunter with eighteen black squirrels, and then discovered a store on the bayou bank. This was the first land we had seen all day. We traveled on again into the woods and made a fine camp in the willows six miles below. The weather had been so good of late that we did not put up the silk tent, but rigged our mosquito-bars to lines from tree to tree, and slept peacefully on our rubber cloth and blankets.

Squirrel *jambelaya* for breakfast—and pancakes and honey from our good friends above. Then off, to encounter a great rush of water coming out of Pigeon Lake that danced us all day merrily in the midst of a river now filled with the beautiful floating hyacinths. We were twenty-two miles in this moving flower-bed without once being able to make a landing. Not that we tried—it was too splendid and novel a trip. We sat back lazily and smoked while the traveling garden bore us on.

"Where," asked Hen once somnolently, "are we going?"

"I don't know. Len said there was a big camp down on Belle River, where the chaps would be glad to see us."

"Where's Belle River?"

"I don't know exactly. Len said it was down somewhere where there was a big camp, where the chaps——"

"Oh," said Hen, "you don't know where you're going!"

"Neither do you," I retorted, and the sun being fine and the morning fair, we couldn't see much use of worrying about it.

If you will take a map of detail you will see the absolute uselessness of worrying. The Grand River in springtime jets out of the Atchafalaya, which spouts out of the swollen side of the Mississippi. The Atchafalaya wanders down through a dozen lakes and nameless bayous to the Gulf, and the Grand meanders its way alongside, with now and then an interlocking arm or bayou running across to its neighbor, and these streams flow in and out, back and forth, in a crazy-patch fashion through unbroken forests. The only thing a fellow had to guess right on was to stick to Grand River and not be deceived by these cross bayous, which would whirl him off into the flooded and unpeopled north shores of Grand Lake, which is not made for pirogue-running, as we remembered well.

But Hen and I never gave it a thought. We "lazed" all that day in the lily drift, only working once when we fought a way to shore to where a tiny farmlet offered a chance to buy eggs. Then a few miles below we found a small channel winding off northward through very tall cypress. That interested us. We knew vaguely that all the water ought to run southeasterly to the Gulf fifty or seventy miles away. But this quiet baby stream, disappearing under the gloomy trees, showing clear water, was enticing. Without any conference we turned into it. It must go somewhere. Maybe to the long-sought Fountain. Who knew?

We had a week's grub—why care? Anyhow, we floated off and into the heart of the biggest virgin cypress we had ever seen. Astonished and delighted with all this primal forest, we paddled on half an hour, and just at sunset we came out suddenly into a sedgy pool that opened on a quiet lake reflecting the sunset, while across, not a quarter of a mile away, uprose the sheer, grim gray of the mighty cypress once more. Never had we come on a more beautiful spot than

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that silent, reed-lined mirror with the towering trees about. We paddled across the lake, wondering if it had an outlet. Then we saw a break in the lower end, a bit of marsh and the distant blue of the evening woods. We headed for this, threaded a lagoon all but lily-choked, and found a stream flowing on as placid and clear as if the roaring yellow of the upper river floods had never found it. As indeed they had not. We were in the upper head of Bay Natchez, but did not know it. We paddled on for an hour, the cypress withdrawing itself until it was again the gray iron wall, while between was the soft green of willowed ridges, acres of purple lilies, bright grasses, and reflecting pools. We paddled down the stream, warily seeking the main channel, for the spot did not offer a camp. And after some miles of this we rounded a marshy bank to discover ourselves once more in the silent and deep-flowing Grand River, the woods on either side and the unending drift of the hyacinths to the sea.

It was dark by now. We battled with the flood and the flowers some time before we could make a landing, and at that were forced ashore almost a mile below the spot we had first picked out. It was amazing where all the lilies came from. The floods must be pushing them out of every swamp from Red River to the Gulf. But we got to land at last where neither lilies nor drift logs impeded and made a hasty camp, broiled some bacon, made tea, and rolled in our blankets. We had put the tent up here, for a storm was brewing in the southwest, and besides we had an idea of looking about this wild bit of woods and water.

A Sunday of amazing glory awaited. I rather think of all the four months' knocking about that camp below Bay Natchez was the best. We saw no one in two days. And the life of the woods and water was varied and unusual. The trees were filled with songsters, bright-hued and flitting, making music all the day, and out over the river black and snowy herons floated. Loons, ducks, and yellow-legged gallinules were circling above the sedgy flat across from us, and a white egret sailed over the lily drift. And as we proceeded with the breakfast-getting, a white-headed eagle floated above us, looking down with sharp, flitting eyes to our humble camp, as if questioning the advisability of allowing us to stay.

After a contenting meal and leisurely smoke we paddled out on the river to look about the bend. The curving forest hid all view below us. The giant gars were splashing the water under the lily drift. The channel here flowed much easier and had lost its yellow, angry hue of the flood water. Along our shore, in the bend, where the slower water from Bay Natchez had the right of way, it was even clear and dark with the peculiar swamp luster which we had noticed often in the untouched deep swamp. And for miles below Bay Natchez, which is merely a huge pocket of the drainage flow from the rivers above, we found the black water and the "white water," as the natives call the flood, running side by side.

We went back to camp, having much difficulty with the lilies in reaching shore. In an hour the breeze sprang up and the rest of the day we were hopelessly blocked in. The water plants packed so tightly along the bank that it took some effort to part them when we wanted to dip a bucket of water from the stream. Sunday, as usual, was washday, and soon we had every dud in camp hanging to the bushes, while we lolled about in an Edenic comfort.

"And not an Eve in forty miles, thank Heaven," Hen said contentedly. "It's great!"

So we smoked and idled. And as fine luck fell we discovered a trim little Mobilian turtle among the driftwood and had him cleaned and in a pot in no time. He made a great stew with tomatoes (canned, of course), onions, potatoes, bacon, and a bit of garlic and thyme. And as we cooked this turtle contentedly we found another and put him in the pirogue, where we carried him for the next week scratching around under the duffles and poking his red-and-striped head about among the canned goods in a sort of injured way, as if it was a mean trick to shut him among all these edibles without a can-opener.

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The wind shifted a point or two and began to move the four-acre patch of hyacinths out of our cove in the afternoon. Then we went fishing, still in our state of *e pluribus unum,* as Hen had it. What was the use of clothes, anyhow? We were astonished at the lack of mosquitoes—and also at the lack of fish. Privately I was glad—never did like to fish much. Even Hen, with all his silver-tipped outfit, lolling in the end of the canoe without a stitch on his hide, a cigarette in his mouth, seemed pleased that the fish didn't bother us. We had grown shiftless, I'll admit. But it seemed good. Even a fellow's tobacco down in this Cajun country was sort of easy-going and fritter-minded, not caring whether it burned or not.

The egrets—snowy-plumed and stately—were flying up the silent river. A great gray heron stood on one leg across from us on a log, reflected perfectly in the slow-shifting mirror. And long angles of ducks went above to their feeding-ground in the prairie which we could see to the west below the cypress wall. As soon as Hen and I could reasonably excuse each other from fishing we went ashore, put on some clothes, and built a roaring bonfire, for the May night was cool. We sang lullabies to each other until nine and then turned in the blankets, first making our usual snake-inspection when we stayed more than one night in a spot. Not a serpent in our Eden.

"Bully!" murmured Hen. "This spot is right-o. Let's stay till we're out of grub!"

But we didn't get through that night without incident. About midnight, when we were lost to the world, one of those sudden, ripping gales hit us and for an hour the air was filled with blown twigs and moss with now and then a limb from one of the cypress crashing down near us. We lay in our blankets, watching the incessant bursts of lightning through the bellying walls of the tent. Several times it lifted wildly in the gusts and then—down it came!

With it came the rain. We lay there under the clammy silk and discussed the weather far from amicably. It was two o'clock before the storm was over, and then we had to get out shiveringly and draw the tent back on its pegs, slopping around in the water pools and incidentally dragging our blankets into the mud. But that was a casual incident. When we crawled out again the day was clear and a cool norther was blowing—very cold, indeed, for the tenth of May in Louisiana.

We felt so chilled in the shades of the great wet trees that I proposed breaking camp and going on down this uninhabited river. We got away at ten o'clock, pushing the canoe out into a singing, creaking lily field and being swept away at once with it on the norther.

A mile below we got ashore on a reedy bank and spent an ineffectual hour trying to photograph the egrets and loggerhead turtles about the pools. But they were too wild, and Hen had also his usual trouble with that camera. It was, as I had remarked before, endowed with so many stops, plugs, throttles, timers, semaphore signals, and nobody knows what else that by the time all these were ready and Hen had studied up his literature to see about the time and lighting and the temperature and the price of wheat at Duluth, the blamed bird or woodchuck or whatever it was had got tired of posing and had gone off. Then Hen invariably accused me of scaring it away.

Then we had to ungear that mysterious camera and repack it, and paddle down this astonishingly beautiful and lonely river. As we looked ahead over the nearer shore we saw higher ridges apparently, a fine hill with a smiling countryside stretched beneath.

It was that old fascinating illusion of the swamps—a vista of marsh appearing to be golden stubble, a line of mangroves like a well-ordered hedge about a decent farm lot and back of it the pasture slopes of New England or Wisconsin—it was incredible that we were looking upon nothing but woods, and woods whose feet were deep in the black cypress water!

But a few miles on we were startled by the shrill yelp of a whistle far in the forest.

"Forgey's camp," said Hen; "it's time we were near it."

But it was not. We came about a bend to a "pullboat" alongside of which

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was a quarter-boat with a good-natured darkey poking his head from the kitchen to greet us. We climbed up and met the boss and the bookkeeper. It was Van Norman's camp, and the pullboat engine was "snaking" the big cypress out of a cutting a mile away by means of a steel cable that ran up the "road" through the forest. We were made welcome, dined with the hospitable crew, engineer, boss, clerk, and other few white men of the camp. Out of the woods poured a wet and dirty army of swampers at noon.

(To be continued)

THE DUCK HUNTER

By CHARLES LEWIS

HE rises in the black of night
And makes his way, by lantern light,
To where the leaky flat-boats ride
Half on and half beneath the tide.
Chilled to the bone by rain and wind
He sets his stool and builds his blind.
He waits, and shivers at the task,
He counts his shells, and tips his flask.
Then, when the cold and hidden sun
Shows nothing doing for his gun,
He slips the farmer's boy a ten
For six high mallards and a "hen."
At last, he hikes for home, pell mell,
To show his bag and lie like everything.

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A COMMON-SENSE RACING ICE YACHT

By H. PERCY ASHLEY

DIAGRAMS BY THE AUTHOR

Plans and Specifications for a Three Hundred Square Footer With Full Estimates of Cost

PROBABLY near where you live is a sheet of water that produces good ice during the winter. There may be ice boats on it and perhaps not very speedy or good to look at; you may have had in mind some good ideas, but you have not been in touch with the locality that produces ice yachts for racing which will develop a speed of a mile a minute under favorable circumstances. It is the object of this article to put before you a set of plans and specifications, with notes on construction, of the latest and lightest constructed racing ice yacht of class E (300 square feet of sail).

Material for backbone and made up hollow spars can be obtained of any firm making such articles. The runner plank can be obtained from a standing tree or a good lumber yard, and you are sure to get a cypress plank most anywhere. Your local blacksmith, or, better still, a coachmaker's blacksmith, will easily turn out your iron work. Hollow spars can be bought or you can make solid ones. The solid spars are one-half inch less in diameter than the hollow ones. All wire and hemp rigging, block and cleats and turnbuckles can be selected from a yacht chandler's catalogue. There are reliable firms who deal in this line in New York, Boston, and Chicago, and there are plenty of good sail makers, East and West, who will turn you out a well-setting suit of sails, bearing in mind that the sails must set pretty flat.

The local foundry will cast your runner shoes and the local machine shop will plane your shoes in shape, or you can file them by taking pains. Good oak for runners and cockpit floor can be found at any lumber yard. The proprietor of the nearest chair factory will bend your cockpit rail and sill and turn out the posts for the rail.

Go to a friend who is an architect, if you do not understand any part of the drafts. There is a scale attached to each drawing. Trace the scale on tracing-paper and move to any part of the drawing you may wish to measure.

For an all-around racing ice yacht 300 square feet of sail is the best. The plans and specifications here given call for a racing ice yacht of class E carrying just under 300 square feet of sail in her jib and mainsail, equipped with hollow backbone and spars. Every feature of her construction is up to date. If her plans are followed and care is used in construction, there will be no question as to her speed and perfect handling. Let it be distinctly understood that this type of a speedy ice yacht cannot be used as a snow-plow, ice-breaker, or gale-subduer. Neither is it a pleasure-party boat. In a strong wind her windward runner will rise, but she will keep rushing steadily ahead just the same and make fast time.

Build your boat in a warm shop. Your gluing of the backbone requires a well-heated place, as no nails or fastenings are required to hold the backbone together. A good kit of carpenter's tools is required; make sure that all of them are sharpened and in perfect condition, and that they stay so until the boat is finished.

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The first step is a thorough study of the plans. You will readily see that the hull is composed of a hollow box constructed stick. The runner plank is solid and placed at right angles from backbone at a given point shown in Plate 3. Runner plank and backbone are fastened together by a saddle. See Plate 5, Nos. 9 and 10. At a given point on the runner plank is fastened the runner plank guy strap—Plate 5, Nos. 30 and 31. This strap is secured by two eyebolts that secure the shrouds for mast. To the two ends of each strap are attached a turnbuckle that in turn is fastened to the fore and aft runner plank guys, ending in loops which pass around the nose and heel of backbone, thus securing the runner plank rigidly at right angles to the backbone. See Plate 3, deck plan.

The Latest Thing in Cockpits

At the end of the backbone is placed the egg-shaped cockpit with banister rail. This is of the latest design, and is known as the Ashley cockpit. The liberal width forward gives ample room for the steersman and sheet tender who always lies facing forward. The small end of the cockpit aft prevents it touching the ice as the windward runner lifts. To the two extreme ends of the runner plank are attached the fore runners. Two parallel chocks, with braces on under side, keep the fore runner straight, and they, as well as the runner, are pierced with a riding bolt, thus enabling the runner to move easily over uneven ice. See Plate 4, F, G, H, I, and J.

The rudder runner is guided by a tiller attached to a rudder post ending in a fork pierced by a riding bolt. Plate 4, B, C, D, and E. The backbone is strengthened by a wire rigging truss known as a bobstay spreader. It starts from a spliced loop at the nose, continues parallel with the backbone and runs under the lower side of the backbone three-quarters back of the under side of the cockpit, where it is secured by a bobstay anchor iron. Plate 5, Nos. 18 and 19. The bobstay is tightened by a turnbuckle attached to the anchor iron. Two struts (Plate 5, Nos. 20 and 21) complete this wire truss known as the bobstay. Their stations are plainly shown by reference to Plate 1.

The greater part of the racing ice yachts are equipped with the sloop rig, as here given, which is composed of two sails, the smaller one being the jib and the larger one the mainsail. The mast is held upright by four wire-rigging stays ending in turnbuckles known as shrouds. The stay that runs from the nose or forward end of the backbone to the head of the mast is the jib-stay. The stay parallel and just forward of the mast, extending from a point a few inches from the lower end of the mast to its head, is the martingale. The spreader that makes the truss is known as the martingale spreader or masthead spreader. The wire rope that hoists the jib is the jib sheet. The wire rope that the inboard part of the mainsail is hoisted with is the throat halyard, while the rope used to elevate the outboard end of the gaff is the peak halyard. Hemp rope is used to trim in the jib and mainsail. The former rope is the jib sheet, while the latter is designated as the main-sheet.

Halyard jigs are used to tune up the wire halyards and are of hemp rope, as is also the jig for the main sheet. We will now take up the specifications for construction. Equipment and tuning up will be treated afterward.

General dimensions of hull: Backbone, 31 feet over all; center, 8½ inches high, 6½ broad at center; nose, 4¼x4¼; heel, 5 inches high, 5 inches broad; center of the mast placed 9 feet 10 inches aft of extreme forward part; distance of center of mast to center of runner plank at point it crosses backbone, 3 feet 7½ inches; center of runner plank to forward end of cockpit, 9 feet 9½ inches; length of cockpit, 7 feet 9 inches; greatest width, 4 feet 1 inch; space of backbone from aft end of cockpit, 1 foot; runner plank, 17 feet 10 inches over all; 14 inches wide at ends, 3 inches thick; center, 16 inches wide, 4½ inches thick.

Backbone: Of box construction, formed of two side strips of Canadian straight-grained seasoned spruce. As dressed are 31 feet long, 1 inch thick,

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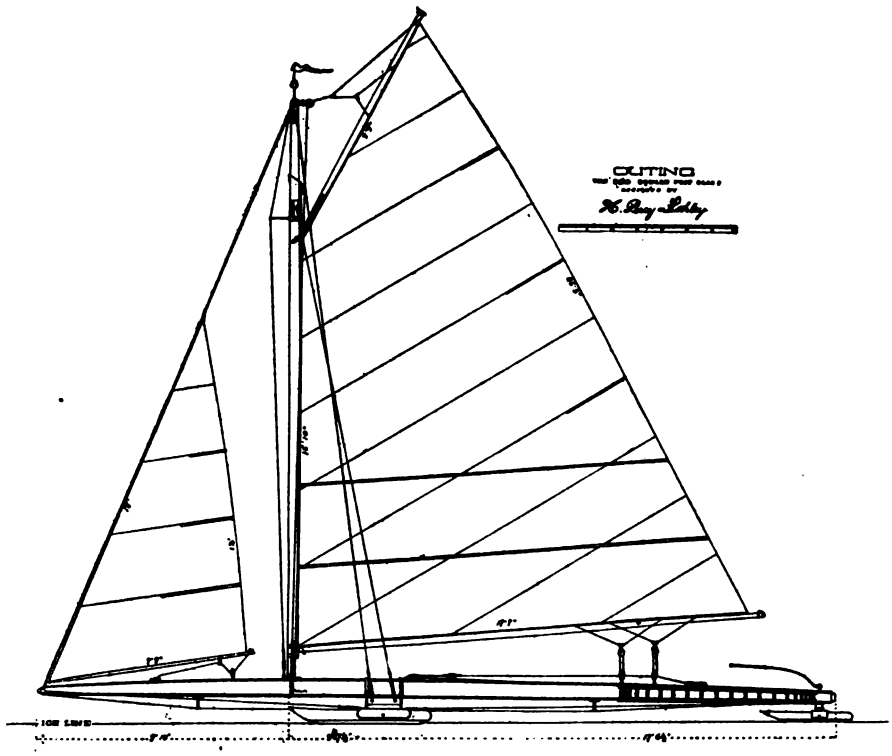

PLATE 1.—SAIL AND SHEER PLAN

6½ inches high. They are capped on top and bottom with strips of Canadian spruce 1⅛ inches thick, full length, and 6½ inches wide at a point 3 feet forward of the mast to a point 5 feet forward of the heel. This space is all 6½ inches wide. Taper to the nose to 4¼ inches wide and at heel to 5 inches. The fore and aft curve on upper side is shown in Plate 4, No. 5. The filling-in partitions are of pine 1⅞ inches thick, spaced 9 inches apart from their outside edges. There are five filling-in blocks. The one at the nose is 2 feet 7 inches long, at mast 1 foot 1 inch long. Runner plank 2 feet 9 inches. See that you get two partitions of 1⅞ inches between mast and runner plank block. Block at forward part of cockpit 3 feet long. At heel block is 3 feet 8 inches long.

The extreme end blocks are made of ordinary good quality of spruce. The mast, runner plank, and forward cockpit block can be of pine or Canadian spruce. For block and partition construction see Plate 3, No. 5.

Now that you have put in the upper curve in the side strips, leaving the under side straight, put in a tongue full length, ¼ inch wide, ⅛ inch high, on side strips. The top and bottom strip is 1⅛ inches thick, has a shoulder of ⅛ inch and a tongue of ⅛ inch. Look closely at Plate 6, No. 33. You will see that every partition and filling-in block fits snugly inside this box formation, and all are glued together firmly. No. 32 shows dimensions of the center partitions when the outside measurements of the backbone are 8½ inches high and 6½ inches wide. The partitions can be let in the side and bottom strips 1/16 of an inch, but don't attempt this unless you are an exceptionally good workman.

You cannot use too great care in fitting partitions, as one ill-fitting partition or filling-in block will weaken all your backbone, similar to cutting part of a strand of rope where strain is required. Glue all together hot. After it is thoroughly dry put collar on nose and heel to receive loops of fore and aft runner plank

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guys. Formation of nose and heel collar or shoulder, Plate 5, Nos. 8 and 12. They are round, slightly pointed, and rounded at their outboard edges. Score in the sides of backbone at heel of collar to receive bulge made by splice in runner plank loop guys.

Runner Plank: The best runner plank is butternut wood cut standing, then sawed with heart on top, but it is very difficult to get. Next comes basswood and a fine grade of white wood. These must be sawed with the heart of the wood on the upper side, which gives it a natural upward curve in drying, so much desired to give spring to your boat over uneven ice. A very good plank can be made of cypress, but it must be ¾ inch thicker than dimensions given for the other planks above. This ¾ of an inch is taken off on the under side of the plank in the form of an upward curve. When finished the thickness will be as required, 3 inches at ends, 4¼ at center, and rounding under side. As complete will have the same dimensions as other planks, but will have an artificial curve upward from runner chuck to runner chuck, instead of a natural curve. The dimensions of runner plank as finished are 17 feet 10 inches over all, 1 foot 2 inches wide at ends, 16 inches at center. Depth, 3 inches at ends, 4¼ inches at center.

Score out under side, commencing at nothing at point just inside fore runner chucks to about 2½ inches at center. For section shapes of runner plank and their dimensions see Plate 6, Nos. 34, 35, and 36. For shape of the side of the ends see Plate 4, G. The distance to set the runners apart known as the straddle of their cut on the ice is 16 feet 10 inches, as see Plate 3. The chucks and braces are let in the plank ⅛ inch and bolted and lag-screwed to it. Plate 4, F, G, and H. Use the utmost care in making plank and securing a perfect one free from checks or knots, although a few minute knots do no particular harm.

Cockpit or Steering-Box: Is 7 feet 9 inches over all and 4 feet 1 inch wide. The flooring is ½-inch oak or ash, 8 inches wide, tongue and grooved, scored with bead at center of plank, thus giving the appearance of being a flooring 4 inches wide. The rail for cockpit is ⅞ inch deep and 1¾ inches wide, with rounded edges. The base for rail posts is 2¼ inches wide and ⅞ inch thick, rounded on its upper edges only. The spacing of rail posts is 6½ inches from center to center. Have bent out shape, as shown in Plate 3, No. 2. The rail should be 2⅛ inches by 2 inches. This, sawed lengthwise, makes the two top rails, and will give you them exactly alike. Treat the base rail the same.

Sink the posts ½ inch in the rail and base. Glue and fasten posts with screws. The under screw starts from under side of flooring through base into the post. Every contact part in cockpit is glued and screwed. Draft of cockpit Plate 2, Figs. 2, 3, and 4.

Runners: See Plate 4. Made of the best grade of quartered oak. The shoes are

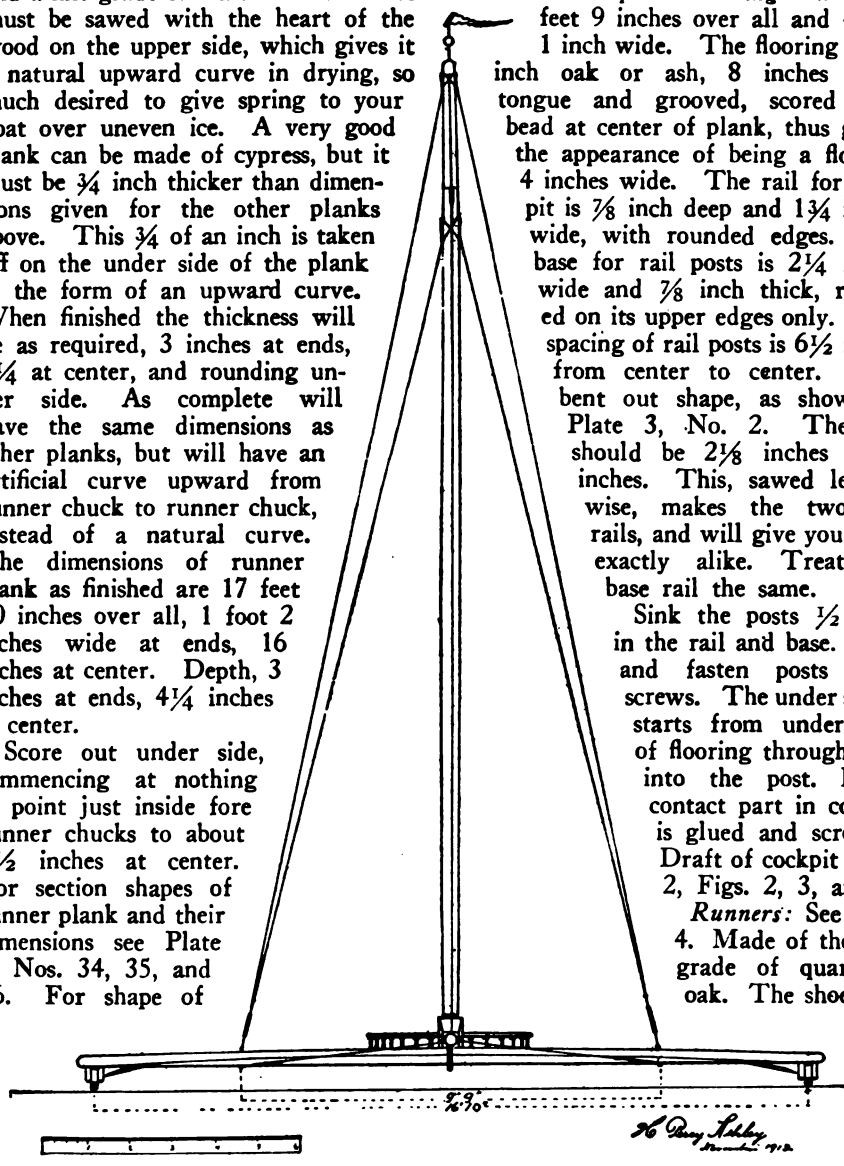

PLATE 2.—RUNNER PLANK AND MAST SET UP WITH COCKPIT AFT

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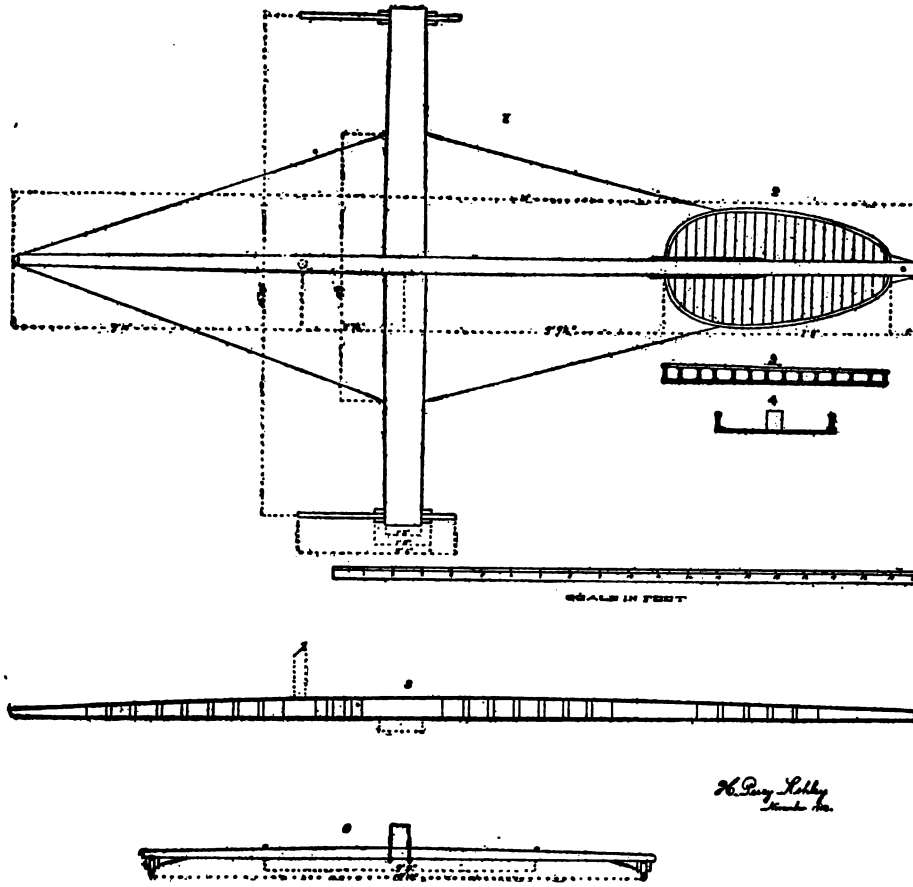

PLATE 3.—DECK, BACK-BONE, AND RUDDER PLANK

soft cast-iron (ordinary cast-iron or any other will not do). The cutting edge is 45 degrees. For midship section of runners note Plate 5, at A. Dimensions of fore runners: Over all, 5 feet 8½ inches; total depth, 7 inches, wood 4⅛, iron 2⅞ inches; width of wood, 2¼ inches. The fore runners are secured to the soft cast-iron shoes by five machine bolts, ⅝ inch in diameter. The heads of the two under the runner plank are filed round and a slot sawed in them, to be screwed down and then plugged with wood over their heads. The three remaining bolts have hexagonal heads. All are equipped with washers.

Under the center of the runner plank on the runner is a ⅛-inch iron or hard brass plate, 6½ inches long and 1½ inches wide, sunk flush on each side of the fore runner, at draft J, Plate 4. They and the wood are pierced with a ¾-inch hole for the riding bolt. Center of center hole 1 foot 11½ inches forward of extreme aft end of fore runners. The two other holes at each side have a spacing of 1¾ inches from center to center. Draft I shows you that top of runner is slightly narrower at nose and heel. The rudder runner is 4 feet 1½ inches over all, 2 1/16 inches wide. Total depth, 5½ inches; wood 3¼ inches, iron 2¼ inches, cutting surface 45 degrees. A plate ⅛ inch of iron, 2¾ inches wide and 9 inches long, is sunk flush with the wood to receive the chafing of the rudder-post fork. Draft C, Plate 4. Shoe is secured by four machine bolts 9/16 inch diameter, hexagonal heads. All securing bolts pass 1⅛ inch into shoe, which has been tapered to receive them. The rudder shoe contact

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with the ice is 2 feet 3½ inches; fore runners 3 feet 5 inches. Each cutting surface has a fore and aft curve of about ⅛ inch, the lowest part being at the riding bolt. This is required in quick turning, as a straight fore and aft cutting surface grinds in coming about.

See that a snug fit is given between runner and shoe; a coat of white lead between contact surfaces does no harm and fills up some of the slight imperfections. The three holes in fore runner riding bolt enable you to shift your runner slightly forward or aft in different kinds of ice.

Holding the Runners

Chocks or Runner Guides: Are of quartered oak, Draft No. 4, H, F, and G, 23½ inches long, 4½ inches deep, 1¾ inches wide. Each chock is fastened to the runner plank by two wagon bolts and two lag screws, all ½ inch in diameter. See H, Plate No. 4. Draft G gives the chock brace made of 1⅜-inch oak, 1 foot 1½ inches long and 3½ inches deep. There are two to each inside chock to which they are rabbeted. Plate 4, F and G. Note at F how the ¾-inch riding bolt for the fore runners is sunk at its square head into the inside chock to prevent its turning. Chocks and braces must be sunk ⅛ inch in plank for the side strain of the boat is tremendous at this point.

Spars: Are all hollow, with the exception of the jib-boom. Their dimensions are as follows: Mast, 22 feet 6 inches over all, 5½ inches at center, at heel 3¾ inches, head 4¼ inches. Boom 18 feet 2 inches over all, center 4 inches, ends 2⅛ inches. Equipped with gooseneck that screws to mast. Gaff 3½ inches at center, 2 inches at ends, 10 feet 2 inches long. Has patent metal or bent oak jaws. Jib-boom is made solid and is 8 feet 1 inch long, 1¾ inches at center, 1 inch at ends. A fork attachment is placed at the stay end to fasten it to the jib-stay turnbuckle.

Turnbuckles, Blocks and Cleats: There are eleven turnbuckles in all, of bronze with fork at each end. Four are required for the shrouds, of ½ diameter thread, four for runner plank guys, ⅜ thread; bobstay ⅝, jibstay ⅝, martingale-stay 5/16 diameter. Blocks for peak and throat halyards, Merriman's open bronze for ⅜-diameter wire rigging; one single side shackle for peak halyard, one single front shackle for throat halyard, one side shackle single block for ⅛ wire rigging for jib halyards. The jib-sheet is trimmed by passing through small bull's-eyes. Main-sheet is rove through two double blocks, shackled to front, and two single blocks equipped with bridle chafers; all main-sheet blocks to take ⅝-diameter rope. The main sheet also has a jig composed of a double block shackle to side and a single block with becket to take ⅜ rope.

The cleats are five in all, being of the hollow bronze pattern, 6 inches long. Standing and running rigging. The four shrouds and the four backstays are all of 5/16 galvanized cast-steel wire rigging, nineteen wires to a strand. Jib-stay ⅜ wire, standing rigging, bobstay 7/16 wire rigging, martingale-stay ¼ diameter wire rigging, peak and throat halyards 5/16 galvanized cast-steel running rigging, six strands and hemp center, each strand containing twelve wires. Jib-halyard ¼ diameter steel, running rigging. Main-sheet ⅝ diameter Columbia bolt rope. Jib-sheet ⅜ bolt rope. Jigs 7/16 bolt rope, all four-strand rope.

Ironwork: Examine Plate No. 5, where all the dimensions are given. Use Norway iron only, as it takes the greatest strain of any iron before breaking. Plate 5, No. 7, is the U iron at the nose of the backbone to which is fastened the turnbuckle that tightens up the jib-stay; 8 is the same U iron, but gives a side view; 9 side view and 10 front view of saddle used to fasten the backbone and runner plank together; 11 is the cap, 12 the sleeve, and 13 bottom of sleeve through which the rudder-post passes; 14 top view of traveler for jib, 15 end view, 16 top, 17 side view of martingale spreader placed at the masthead to stiffen mast. Connected and acting as a strut with the martingale-stay, it forms a truss; 18 and 19 anchor for bobstay to which bobstay turnbuckle is fastened; 20 and 21 are the side and front view of struts that spread the bobstay; 22 side, 23 top,

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24 end of mast-plate on which the mast is stepped (secured) to the backbone; 25 shows the style of latest block for running wire rigging; 26 the correct kind of turnbuckle to use.

Solid thimbles for rigging should always be used for this kind of turnbuckle, which is made of bronze; 27 and 28 are the bar grip passing under the runner plank and screwed up by the legs of the saddle; 29 is two views of saddle spreader that prevents the grips from working apart, as the strain of the sail comes on the backbone at base of the mast; 30 under view, 31 side view of toggle iron. Through this iron pass two eye-bolts to which are fastened the turnbuckles that lead to the shrouds; the holes at the ends are to receive the turnbuckles for the fore and aft runner plank guys.

Steering Gear: The rudder-post and fork are all one piece of Swedish iron or soft tool steel. The crotch is 8 inches long, 3 inches deep, ⅜ inch thick. The inside measurement is 2 1/16 inches wide and must fit tightly, but allowing the rudder to play inside the crotch. On top of the crotch a collar 1¼ inches is forged and to this in turn is forged the rudder-post, which is 1 foot 1¼ inches from collar to end of bolt thread, diameter 1½ inches. Plate 4, D and E. At C a rubber washer 1½ inches thick fits around the rudder-post. It has a brass washer ⅛ inch thick on top and bottom. B and C give the formation of the tiller, which is 3 feet 9 inches long. There is a square head at rudder-post to which it fits, and the tiller is held in place at the rudder-head by an octagonal nut.

The latest way to fix a rudder-post sleeve is shown on Plate 6, 37, 38, and 39. A space of ¼ inch is left between the rudder-post and sleeve. Babbett metal is then heated and poured in, making a tight sleeve. As soon as the rudder

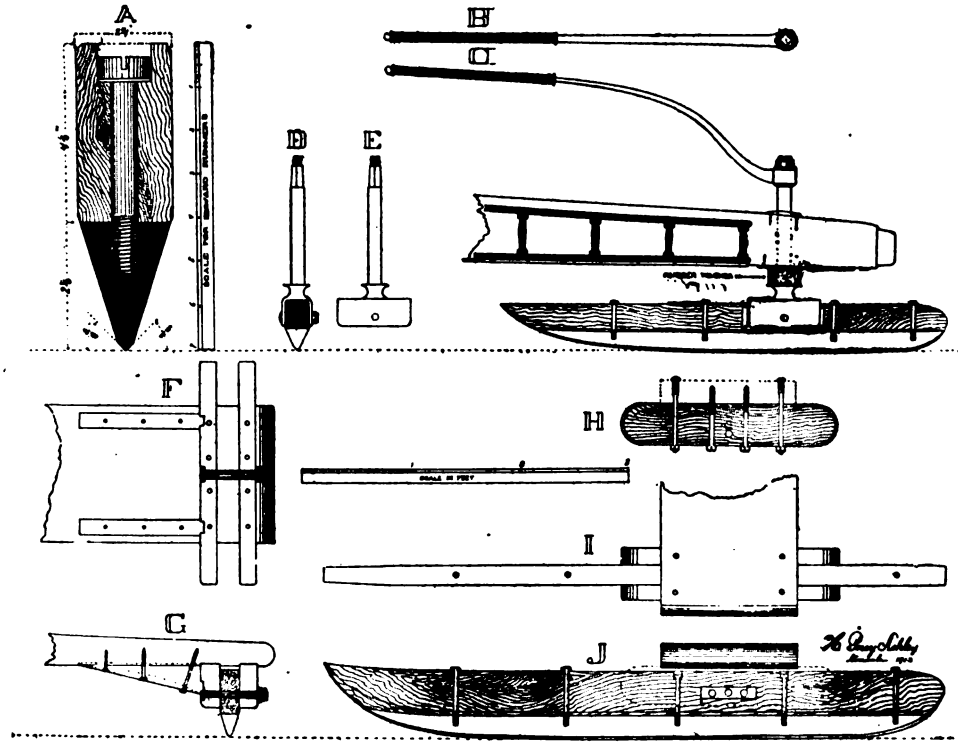

PLATE 4.—RUNNERS AND STEARING GEAR

A, midsection enlarged for runner; B, upper side of tiller; C, steering runner rudder-post and tiller; D, rudder-post and fork; E, side view; F, under side of runner plank, showing guides and braces; G, outboard end of runner plank, with runner, chocks, and brace; H, side view of chocks, showing fastening; I, end of runner plank, top of runner, and chocks; J, fore runner.

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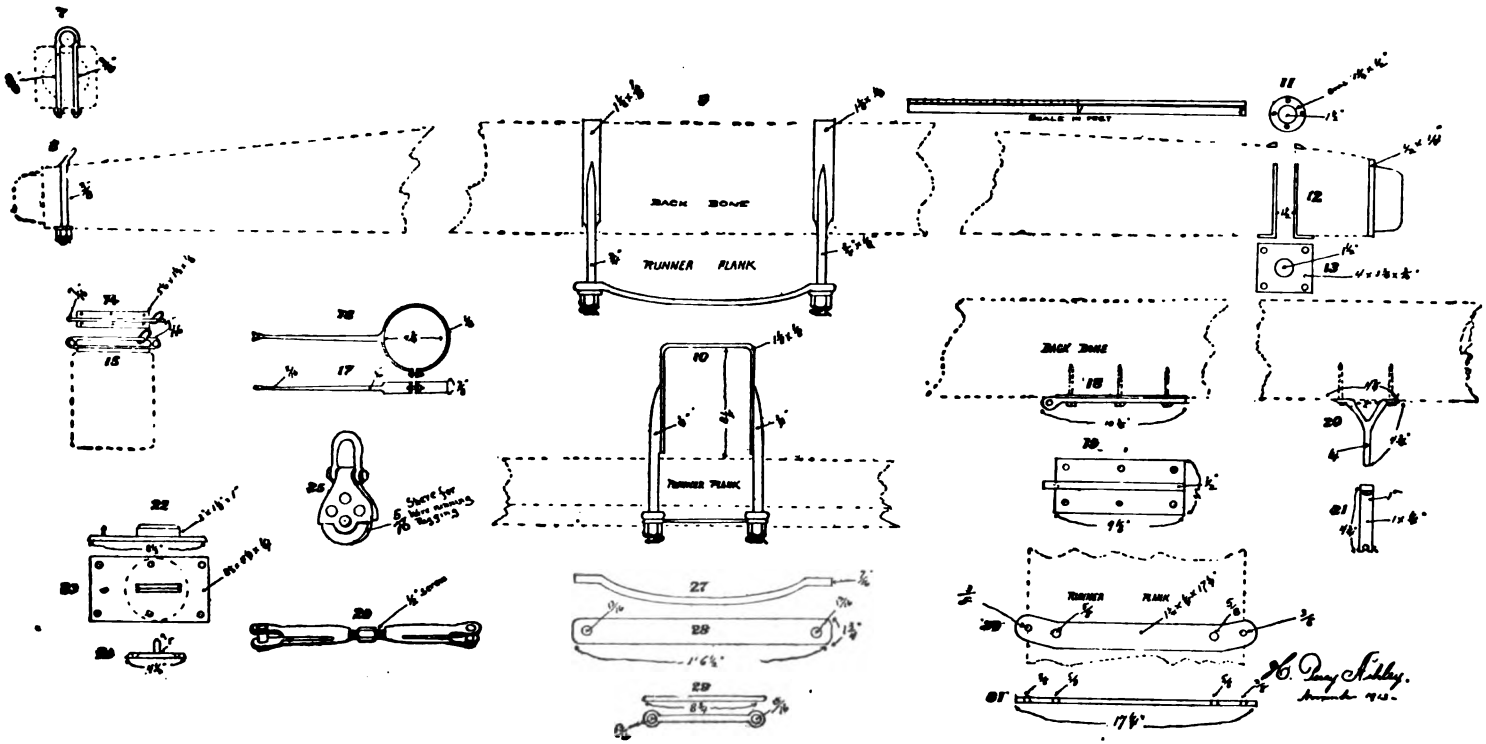

PLATE 5.—IRON WORK

7, U iron for jib-stay front; 8, U iron for jib-stay side; 9, saddle, side view; 10, saddle, front view; 11, cap on rudder-post; 12, sleeve of rudder-post; 13, chafing plate to fasten to sleeve; 14, jib traveler, top view; 15, jib traveler, side view; 16, masthead spreader, top view; 17, masthead spreader, side view; 18, fastening for bobstay, side view; 19, fastening for bobstay, under side; 20, side view of spreader for bobstay; 21, front view of spreader for bobstay; 22, mast-plate, side; 23, mast-plate, top; 24, mast-plate, end; 25, the kind of blocks to use for wire rigging; 26, the proper style of turnbuckle to use; 27, side view of grip for saddle; 28, under side view of grip for saddle; 29, spanner for saddle-posts, sides and top; 30, 31, toggle iron to which turnbuckles for runner plank is fastened, and also shroud bob eyes.

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commences to wabble take out your sleeve, heat it, and out comes the babbett metal. Melt the metal and pour around the sleeve and rudder-post and you have a new bearing. Babbett metal heats as easily as lead. You cannot steer a perfectly straight course with a shaky rudder-post. Let me caution you here not to start having your ironwork made until all the woodwork is finished, for then you can measure correctly for it.

Rigging Requirements: The shrouds, runner plank guys, martingale-stay, bobstay, and jib-stay all have loops spliced on one end; the other end is spliced around a thimble to which is attached a turnbuckle. The upper bridle of gaff has a loop spliced at upper end, the lower extremity has a bridle chafer, and the lower bridle has two loops. The two boom bridles have a loop spliced in each end. Peak halyards carry a bridle chafer spliced at upper end and an open thimble at the lower extremity, being one of the formations of a Higginson jig. The throat halyards have an open thimble spliced in each end, as do the jib-halyards.

The Higginson hoist is very simple and effective and does away with cumbersome blocks attached to the halyards and the coil of rope that goes with them. Splice in a piece of light line in the thimble at the end of your halyard and let the halyard of wire rope go up as far as it can, cut off your rope, pull down, pass the rope first through open cleat at backbone at foot of mast, then pass rope through thimble at running end of halyard, sway away; as tautened to limit make fast to cleat. There you are, simple, inexpensive, and the best of jigs for a nice yacht.

The main-sheet is attached to the main-boom by a pair of bridles of 5/16 diameter steel running rigging. To them are attached two single blocks with bridle chafers, two double blocks with shackles, parallel with sheaves of blocks, work on two travelers like the one used for the jib. The forward end of main-sheet ends in jig composed of double block and single block with becket. Main-sheet 9/16 four-strand bolt rope. The after end fastens at cleat on backbone. Gaff bridles same size of wire rigging as main-boom bridles. All loops are sewed with cord and canvas, finished at splice. All rigging is shown in Plates 1 and 2.

The Right Sails

Sails: The sails should be light but of a very close-woven, special racing duck, which is carried by all first-class sailmakers. Never get a low-priced sail, as they are no good. If you want to make fast time, get the most expensive sails, as they will stay in shape. The dimensions are as follows: Mainsail, hoist, 15 feet 10 inches; boom, 17 feet 7 inches; gaff, 9 feet 9 inches; leach, 26 feet 3 inches; diagonal from jaws of gaff to end of sail at outboard end of boom, 22 feet 6 inches; leach, 26 feet 3 inches; jib on stay, 15 feet; foot, 7 feet 9 inches; leach, 13 feet. The sail should set pretty flat with a fair roach on the leach. These sails must be made up fully stretched about seven feet under three hundred square feet total measurement.

Have hand-sewed reefing cringles, with no reefing nettles; draw cord on leach of both sails; wire rope at hoist of mainsail sewed in sail, the same of jib on stay. This must be done, as the sails hoist with wire. The best sail cover yet got up extends from the nose to heel of backbone and covers the sails as well as backbone and cockpit, all in one piece. A separate cover can be had for the runner plank. Put your boat on horses. Take out the five runners, the rudder-post and rudder, and with a full-length cover you can defy any rain or snowstorm.

Varnish, Etc.: Put on a coat of light-colored filler, sandpaper, then two coats of spar varnish, the first one being sandpapered smooth before applying the second coat. All ironwork to receive two coats of aluminum bronze. Buff up all bronze work, and give one coat Egyptian lacquer and it will keep like bright gold all winter. Wind the tiller with ⅛ diameter cotton braided rigging and give coat of shellac and then one of varnish. In getting varnish use only a light-colored grade that costs you not less than $5.00 per gallon. The cheaper

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grades will not stand the winter exposure. Make three substantial wooden horses to keep at least 1¾ feet from the ice.

Cost of material for a 300-square-foot racing ice yacht:

Wood for backbone	$26.00
" " runner plank (basswood)	30.00
Mast (hollow)	27.50
Boom	17.10
Gaff	7.80
Jib-boom (solid)	1.00
Sails	70.00
Steering-gear and goose-neck	26.00
Ironwork	21.00
Blocks, etc.	17.20
Turnbuckles	31.00
Cleats	4.00
Wire and rope rigging, etc	17.40
Runners	14.00
Varnish, bronze, etc	10.00
Total material	$320.00
Labor	280.00
	$600.00

You are always safe in figuring about $2 per square foot of sail that a racing ice boat carries for her price complete, without cushions for cockpit.

If you wish a solid-stick backbone, make it the same length as plans, same width as given at ends, but the center of timber should be 9½ inches by 5¼ inches. Use basswood, spruce, or redwood. The spars can be made solid, but should be reduced about ½ inch in diameter. Galvanized turnbuckles can be also used, and a sail could be made for about $40 with close figuring. This style of boat can be got up, for material alone, for about $225.00. It will make up a good boat, but not as speedy as the other type.

If you are not a finished workman yourself, you probably will have a friend who is. At the worst a good workman can be hired to help you over with the more difficult parts. In selecting your wood see that it is thoroughly seasoned; if not, it will be useless for boat-building. In fastening the runners, that is, setting the chocks or runner guides, great care must be taken that they are exactly parallel with each other full length. Do not set them until the fore runners are entirely finished, as you must be guided by the cutting edge fore and aft of the runner. By having the soft cast-iron cutting edge of the shoes planed at a machine shop you will secure a perfectly straight edge of 45 degrees. And do not forget the shoe must have a downward curve of ¼ inch. The machinist can do this by clamping the shoe in the center and planing; then let it spring back, and you have the curve.

Getting the Runners True

To determine if your runners are guyed up true, select a patch of glare ice and shove your boat a few feet over it. If it leaves a clear cut on the ice your boat is guyed up correctly. If not, tighten or loosen the runner plank guys until the fault is corrected. If this is not accomplished your runners are not set straight. A grinding runner kills your speed.

Ice yachts are divided into classes as follows: Class A, 600 square feet of sail and over; Class B, 450 square feet and up to 400 square feet; Class C, 400 square feet; Class D, 350 square feet; Class E, 300 square feet; Class F, 250 square feet; Class G, 200 square feet; below this they are bunched as mosquitoes. From the above you will see that the 300-square-foot class is the happy medium. The larger boats get brutish in a blow and are difficult to handle. In fact, they are seldom built larger than 450 square feet.

To try your new boat, select a day with only a moderate breeze and a patch of smooth ice. Go all over her and see that everything is taut and in place. Note that every nut is equipped with a cotter pin and that the pin is spread. Head the boat in the eye of the wind, turn your rudder at right angles with the backbone, hoist your mainsail, jig up the throat and then the peak high enough to make a slight wrinkle in the mainsail, hoist and jig up jib, leaving the jib-sheet loose, as it should always be while the boat is at rest. Now, sway on the main-sheet and make fast. Trim in jib-sheet and make fast. Pull your tiller straight and shove her ahead; as she gains headway turn your tiller but very slightly, and the sails will begin to fill. That is the time to jump aboard,

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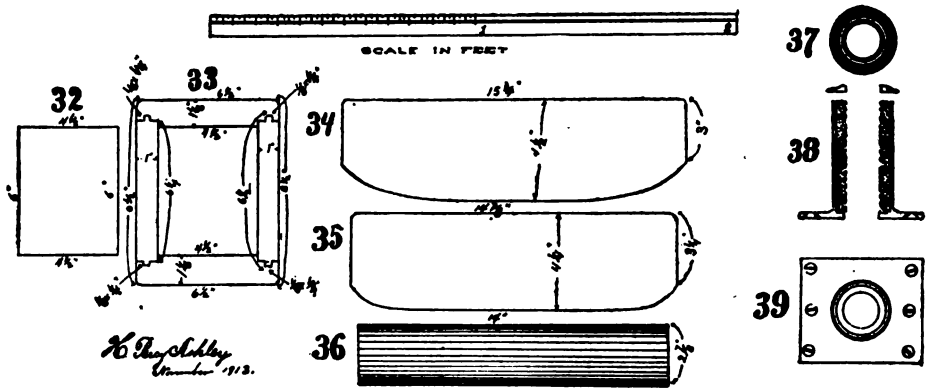

PLATE 6.—SECTIONS OF BACKBONE RUNNER PLANK AND RUDDER POST SLEEVE

32, filling in piece center of backbone; 33, box of backbone at center; 34, center of runner plank. 35, halfway between center and end of runner plank; 36, ends of runner plank; 37, cap for rudder-post; 38, sleeve for rudder-post filled with babbitt metal; 39, base of sleeve for rudder-post.

grasping the tiller in your right hand and facing forward. Quickly the boat will gain headway and be rushing over the ice.

Never make a short turn with a new boat, but ease her in every possible way until you are well acquainted with her. They require humoring at the start. The sails should never be pulled out at the gaff or boom to their limit until after a good week of sailing. More sails are ruined by excessive stretching at the start than from any other cause. A good sail-maker will attach a ticket to each sail giving you the limit to stretch them on the gaff, main-boom, and jib-boom. Never leave your boat off the horses if even for an hour. If not in use for a day or two remove all three runners and put them in a dry, sheltered place. Equip the jib with snap hooks so you can remove it each night.

The mainsail can either have hoops on the mast or be laced on, the lacing being loosened every time the sail is lowered. The former is the handiest, while the latter keeps the sail closer to the mast. Lacing is preferred by our leading professional racing skippers.

In setting up the runner plank guys and shrouds do not strain them to their utmost, but leave them loose enough to have a little shake. The ice boat requires some relaxation to make fast speed and overcome the slight jar over uneven ice.

By referring to the plate containing details of the runners you will see that at the base of the rudder-post there is a substantial rubber washer; this lessens the jar to the steersman, while the spring of the runner plank removes it to a great extent from the boat. This elasticity enables a boat to find herself. The type of thirty or thirty-five years ago in which I gained my first knowledge of ice yachting was of the rigid construction of the side-bar type. In other words, there were wooden joists in place of wire rigging runner plank stays. They were bone shakers. Many was the time after a day's sailing I was hardly able to walk home, owing to the bruises caused by bouncing up and down on the flooring of the cockpit while steering.

The runner plank seems to be the most difficult part of the boat to get. If you have access to a standing tree from which a plank can be cut, one tree makes two planks. Cut the tree in March. Four cuts with the saw are required; two of these remove the heart of the tree and form one side of the plank (the upper side). Two more cuts remove the slabs. Throw the heart and slabs away, and you have remaining two planks. Season until fall in a cool, dry, airy place. Then work in shape. The part of the plank nearest the heart is the side to receive the curve (upper side). The lower is worked out perfectly straight, and it will take a slight curve upward. I have had the greatest success with planks that have been sawed immediately after cutting

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and submerged in fresh water from March to September. They season well and have no chance to check. They will be dry enough for working if kept under cover for ten days.

From a point one foot forward of the cockpit on the backbone top running aft to a foot and a half forward of the cockpit put a handrail. It is made of hickory or oak and is about 3½ feet long, 3⅛ inches high, and 1 inch wide. It has hand-grips cut out along its full length, allowing plenty of room for a hand encased in a thick glove.

Do you slice your drives? If so, read the article and study the diagrams in the February OUTING on "The Slice in Golf"

HOW TO MAKE THE WARMEST BLANKETS ON EARTH

A TENDERFOOT who has never been camping is apt to consider his bed as needing little attention in making, for he is out "roughing it," or else he is apt to be dissatisfied with anything less than the usual elaborate comforts of home. Both ideas mark the tenderfoot. In the first place a skilful woodsman does not rough it with the very simplest of outfits. His mark as an expert lies in his ability to "smooth it" in a rough environment and under most trying conditions. With a good bed and proper sleep one is fitted for a good day, otherwise the camp-work becomes drudgery and the night's rest a nightmare and a longing for home.

Wool blankets are most conveniently used over ticks filled with browse, leaves, hay, or grass and for ordinary weather they are sufficient. On cold nights the Northern Indians have found the woven rabbit-skin blanket far ahead of any other kind of bed covering.

One can make these fur blankets at home. One should tan a number of rabbit or cat skins and cut them into strips ½ inch wide and in a circle around the edge of the skin so that when you have finished the skin is in one strip. Now cut the strips in lengths proper for the width and length of an ordinary small bed quilt. Next attach one end to a solid support with a tack and twist the other end so that the leather side is rolled in and the furry side out.

These strips are used to weave the blanket and you should make a frame the size of the blanket and then tack all the long, furry strips to the frame ends so that they are parallel. Now one end of the cross strips is tacked on one frame side and woven under one long strip and over the next, then under the third one and so on. Repeat this with the remainder of the short strips. It is a tedious job and requires a number of skins to furnish the strips, but when finished you have an ideal cold weather camp blanket.

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THE TRAIL TO YESTERDAY

By CHARLES ALDEN SELTZER

Author of "The Two-Gun Man," "The Coming of the Law," etc.

CHAPTER XVI

Some Memories

THOUGH in a state of anxiety and excitement over the incident of Duncan's visit and the shooting, and a realization of Dakota's danger, Sheila did not lose her composure. She ran to the river, secured the water, and returned to the cabin. She discovered that Doubler had received no injury, and she paused long enough for him to tell her that Duncan had entered the cabin shortly after she had left it. He had attacked Doubler, but had been interrupted by Allen, who had suddenly ridden up. Duncan had concealed himself behind the door, and when Allen had entered Duncan had struck him on the head with the butt of his six-shooter, knocking the sheriff down. The blow had been a glancing one, however, and Allen had recovered quickly, seizing Doubler's rifle and trying to bring Duncan down as he fled.

While attending to Doubler's bandages Sheila repeated the conversation she had had with Allen concerning the situation in which he had left Dakota, and instantly the nester's anxiety for his friend arose.

"There'll be trouble sure, now that Allen's left there," he said. "Dakota won't be a heap easy with them deputies."

He told her to let the rebandaging go until later, but she refused.

"Ride, ma'am!" he told her when she was ready to go, his cheeks flushed with excitement, his eyes bright.

The pony snorted with surprise as she brought her riding-whip down against its flanks when turning from the corral-gate, but it needed no second urging, and its pace when it splashed through the shallow water of the crossing was fully as great as that of Duncan's pony, which had previously passed through it.

Once on the hard sand of the river trail it settled into a long, swinging gallop, under which the miles flew by rapidly and steadily. Sheila drew the animal up on the rises, breathing it sometimes, but on the levels she urged it with whip and voice, and in something more than an hour after leaving Doubler's cabin she flashed by the quicksand crossing, which she had estimated as being not more than twelve miles from her journey's end.

She was tired after her long vigil at Doubler's side, but the weariness was entirely physical, for her brain was working rapidly, filling her thoughts with picturesque conjecture, drawing pictures in which she saw Dakota being shot down by the deputies. And he was innocent!

When she reached the last rise—on the crest of which she had sat on her pony on the morning following her marriage to Dakota in the cabin and from which she had seen the parson riding away—she was trembling with eagerness. It was three miles down the slope, and when she reached the level there was Dakota's cabin before her—she saw him standing in the open doorway—framed in a light from within—and before him, grouped in front of the door, were several men. She had arrived in time.

Certain of this, she felt for the first time her physical weariness, and she drew her pony to a walk, approaching the cabin slowly. Her father was there, she observed as she came closer, and three strangers—and Allen! And near Allen, sitting on his horse dejectedly, was Duncan! One of Duncan's arms swung oddly by his side, and Sheila thought instantly of his curse when he had been riding by her at the river crossing. Evidently Allen's bullet had struck him.

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Her presence at Dakota's cabin was now unnecessary, and she experienced a sudden reluctance to appear among the men. She had turned her pony and was about to ride silently away, intending to return to Doubler's cabin, when Allen turned and saw her. He spurred quickly to her side, seizing her pony's bridle-rein and leading it toward the light at the door.

"It's all right, ma'am," he said; "I got him. Holy smoke!" he exclaimed as they came within the radius of the light; "you certainly rode some, didn't you, ma'am?"

She did not answer; she saw her father look at her; saw him start, smiled scornfully when she observed a paleness overspread his face. She looked from him to Duncan—the latter flushed and turned his head. She heard Allen's voice again, speaking to Dakota:

"This young woman has rode twenty miles to-night—to save your hide, you durned cuss. If you was any ways hospitable you'd——"

Allen's voice seemed to grow distant; the figures of the men in the group blurred; the light danced; she reeled in the saddle, tried to check herself, failed, and toppled limply forward over her pony's mane. She heard an exclamation, saw Dakota spring suddenly from the doorway—felt his arms around her. She struggled for a moment in his grasp, trying to fight him off, and then she drifted into oblivion.

When she awoke she was in Dakota's cabin—in the bunk where she had lain another night in the yesterday of her life in this country. She recognized it instantly. There was the candle on the table, the familiar chairs, the fireplace, the shelves upon which were Dakota's tobacco tin; there was the guitar, with its gaudy string, suspended from the wall. If it had been raining she might have imagined that she had just awakened from a sleep in that other time. She felt a hand on her forehead, a damp cloth, and she opened her eyes to gaze fairly into Dakota's.

"Don't, please," she objected, shrinking from him.

It occurred to her that she had uttered the same words to him before, and, closing her eyes for a moment, she remembered. It was when he had tried to assist her out of the water at the quicksand crossing, and as on that occasion his answer was the same:

"Then I won't."

She lay quiet for a time, utterly tired, wondering vaguely what had become of her father, Duncan, Allen, and the others. She would have given much to have been able to lie still for a time, to rest. But that was not to be thought of. She struggled to a sitting position, and when her eyes had become accustomed to the light she saw her father sitting in a chair near the fireplace. The door was closed—barred. She glanced again at her father and then questioningly at Dakota.

"Where are the others? What does this mean?"

"Allen and his men have gone back to Lazette," said Dakota quietly. "This means"—he pointed to Langford—"that we're going to have a little talk—about things."

Sheila rose. "I don't care to hear any talk; I am not interested."

"You'll be interested in my talk," said Dakota. Curiously, he seemed to be invested with a new character; just now he was more like the man he had been on the night she had met him the first time—before he had forced her to marry him—than he had been since. Only, she felt, as she watched him, standing quietly in the middle of the room, the recklessness that had marked his manner that other time seemed to have entirely disappeared, seemed to have been replaced by something else—determination. Beneath the drooping mustache Sheila saw the lines of his lips; they had always seemed hard to her, and now there were little curves at the corners that hinted at amusement—grim amusement.

His eyes, too, were different; the mockery had departed from them; they were steady and unwavering as before, and though they still baffled her she was certain that she saw a slumbering devil in them—as though he possessed some mysterious knowledge and purposed to confound Sheila and her father with it, though in his own way and to suit his convenience. Yet behind it all there lurked a certain gravity—a cold deliber-

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ation that seemed to proclaim that he was in no mood to trifle and that he purposed to follow some plan and would brook no interference.

Fascinated by the change in him, Sheila quietly resumed her seat on the edge of the bunk, watching him closely. He drew a chair over to the door, tilted it back and dropped into it, thus mutely announcing that he intended to keep them prisoners until he had delivered himself of that mysterious knowledge which was on his mind.

Glancing furtively at her father, Sheila observed that he appeared to have formed some sort of a conclusion regarding Dakota's strange actions also, for he sat very erect in his chair, staring at the latter, an intense interest in his eyes.

Sheila was interested, too; she had forgotten her weariness, and yet Dakota's first words disappointed her—somehow they seemed irrelevant.

"This isn't such a big world, after all, is it?" He addressed them both, but he looked at neither. His tone was quietly conversational, and when he received no answer to his remark he looked up with a quiet smile.

"It isn't, for a fact. Take us three. You"—he said, pointing to Langford—"come out here from Albany and buy a ranch. You"—he smiled at Sheila—"came with your father as a matter of course. You"—he looked again at Langford—"might have bought a ranch in some other part of the country; you didn't need to buy this particular one. But you did.

"Take me. I spent five years in Dakota before I came here. I've been here five years. A man up in Dakota wanted me to stay there; said he'd do most anything for me if I would. But I didn't like it; something kept telling me that I ought to move around a little. I came here, liked the place, and I've stayed here. I've told you this just to show you that the world isn't such a big place when you consider that three persons can meet up like that—their trails leading them to the same place."

"I don't see——" began Langford.

"No," returned Dakota, and now there was a note of sarcasm in his voice, "you don't see. Lots of folks don't see. But there's trails that lead everywhere. Fate marks them out—blazes them. There's trails that lead folks into the future; crossing trails; crooked trails, straight ones—all kinds. Folks start out on a crooked trail, trying to get away from something, but pretty soon another trail crosses the one they're on—maybe it will be a straight one that crosses theirs, with a straight man riding it.

"The man riding the crooked trail and the man riding the straight trail can't go any farther; there's got to be an accounting. That's what happened here. You"—he smiled gravely as he looked at Langford—"have been riding a crooked trail. I've been hanging on to the straight one as best I could. We've got to where the trails cross."

"Meaning that you want an explanation of my action in burning that forged agreement, I suppose?" sneered Langford.

"Still trying to ride the crooked trail," smiled Dakota, with the first note of mockery that Sheila had heard in his voice since he had begun speaking. "Why, man, I'd have shot myself before I'd have shot Doubler. He's my friend—the only real friend I've had in ten years."

"Then when you signed the agreement you didn't mean to keep it?" questioned Langford, incautiously, disarmed by Dakota's earnestness.

"That agreement has nothing to do with the accounting I spoke of," said Dakota with a strange smile. "What I'm after is to show you how your trail has crossed another man's.

"Ten years ago a boy named Ned Keegles went to Dakota. I'm glad to see that you know him," he added with a smile as Langford started and stiffened in his chair, his face suddenly ashen; "you knowing him will save me explaining a lot. Well, Ned Keegles came to Dakota—where I was. He was eighteen, and wasn't strong. But he got a job punching cows, and I got to know him pretty well. He didn't like the work, because he had been raised differently. Used to live in Albany; his father, William Keegles, was in the hardware business with a man named Langford—David Dowd Langford."

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Dakota smiled enigmatically at Sheila and coldly at the now shrinking man in the chair beside the fireplace.

"One day Ned Keegles got sick and he took me into his confidence. He wasn't in the West for his health, he said; he was a fugitive from the law, accused of murdering his father. It wasn't a nice story to hear, but he told it, thinking he was going to die.

"One day he went to his father's office. His father's partner, David Dowd Langford, was there, talking to his father. They'd had hard words. Keegles's father had discovered that Langford had appropriated a large amount of the firm's money. By forging his partner's signature he had escaped detection until one day the elder Keegles had accidentally discovered the fraud—which was the day that Ned Keegles visited his father. It isn't necessary to go into details, but it was perfectly plain that Langford was guilty.

"There were hard words, as I have said. The elder Keegles threatened to prosecute. Langford seized a sample knife that lay on Keegles's desk and stabbed him, killing him instantly. Then, while Ned Keegles stood by, stunned by the suddenness of the deed, Langford coolly walked to a telephone and notified the police of the murder. Hanging the receiver up he gave the alarm, and a dozen clerks burst into the office, to find Ned Keegles bending over his father, trying to withdraw the knife.

"Langford accused young Keegles of the murder. He protested, of course, but seeing that the evidence was against him, he fought his way out of the store and escaped. He went to Dakota—where I met him." He hesitated and looked steadily at Langford. "Do you see how the trails have crossed—the crooked one and the straight one?"

Langford was leaning forward in his chair, a scared, fearful expression in his eyes, his teeth clenched in an effort to control his emotions.

"It's a lie!" he shouted. "I didn't kill him. He——"

"Wait!" Dakota rose from his chair and walked to a shelf, from which he took a box, returning to Langford's side and opening it. He drew out a knife, shoving it before Langford's eyes and pointing out some rust on the blade. "This knife was given to me by Ned Keegles," he said slowly; "those rust spots on the blade are from his father's blood. Look at it!" he said sharply, for Langford had turned his head.

At the command he swung around, his gaze resting on the knife. "That's a pretty story," he sneered.

Dakota's laugh when he returned the knife to the box chilled Sheila as it had chilled her when she had heard it during her first night in the country—in this same cabin, with Dakota sitting at the table—a bitter, mocking laugh that had in it savagery controlled by an iron will. He turned abruptly and walked to his chair, seating himself.

"Yes," he said, "it's a pretty story. But it hasn't all been told. With a besmirched name and the thoughts that were with him all the time life wasn't exactly a joyful one for Ned Keegles. He was young, you see, and it all preyed on his mind. But after a while it hardened him. He'd hit town with the rest of the boys and he'd drink whisky until he'd forget. But he couldn't forget long. He kept seeing his father and Langford; nights he'd start from his blankets, living over and over the scene. He got so he couldn't stay in Dakota. He came down here and tried to forget. It was just the same.

"One night when he was out on the trail near here he met a woman. It was raining and the woman had lost the trail. He took the woman in. She interested him, and he questioned her. He discovered that she was the daughter of the man who had murdered his father—Langford."

Langford cringed and looked at Sheila. She was looking straight at Dakota, her eyes alight with knowledge.

"Ned Keegles kept his silence, as he had kept it for ten years. But the coming of the woman brought back the bitter memories, and while the woman slept Keegles turned to the whisky bottle for comfort. As he drank his troubles danced before him—magnified. He thought it would be a fine revenge if he should force the woman to marry him, striking at the father's pride. If it hadn't

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been that a parson blundered in the marriage would never have taken place—Ned Keegles would not have thought of it. But he didn't hurt the woman; she left him pure as she came—mentally and physically."

Langford slowly rose from his chair, his lips twitching, his face working strangely.

"You say she married him—Ned Keegles?" he said, his voice high-keyed and shrill. He turned to Sheila after Dakota's nod. "Is this true?" he demanded. "Did you marry him?"

He caught Sheila's affirmative nod and sank limply into his chair.

Dakota smiled with flashing eyes and continued.

"Keegles married the woman," he said evenly, "because he thought that she was Langford's real daughter." He looked at Sheila with a glance of compassion. "Later, when Keegles discovered that the woman was only Langford's stepdaughter, he was mighty sorry. Not for Langford, however; he was still determined to have his revenge.

"One day Langford came to Keegles with a proposal. He wanted Keegles to contract to kill a certain man—named Doubler. Keegles agreed, for the purpose of getting Langford into——"

Dakota hesitated, for Langford had got to his feet and stood looking at him, his eyes bulging, his face livid.

"You!" he said, in a choking, wailing voice. "You—you, are Ned Keegles! You—you—why——" he hesitated and passed a hand uncertainly over his forehead, looking from one to the other of them with glazed eyes. "You're a liar!" he suddenly shrieked, his voice raised to a maniacal pitch. "It isn't so; you—both of you—have conspired against me!"

"Wait!" Dakota got to his feet, walked to a shelf, and took down a small glass, a pair of shears, a shaving cup, and a razor. While Langford stood staring at him in fear and wonderment he deftly snipped off his mustache with the shears, lathered his lip, and completed its destruction with the razor. Then he turned slowly and confronted Langford.

The latter looked at him with one long, intense gaze, and then with a dry sob that caught in his throat he covered his face with his hands, shuddered convulsively, and without a sound pitched forward, face down, at Dakota's feet.

* * * * * *

After a time Sheila rose from the bunk and stood in the center of the floor, looking down at her father. Dakota had not moved. He stood, also watching Langford, and did not speak until Sheila addressed him.

"What are you going to do now?" she asked dully.

"Do?" He smiled grimly at her. "I have been waiting for this day—it is ten years. It must go on to the end."

"The end?"

"Yes, the end," he said gravely. "He," he pointed to the prostrate figure, "must sign a written confession."

"And then?"

"He will return to answer for his crime."

Sheila shuddered and turned from him with bowed head. "Oh!" she said, "it will be too horrible. My friends in the East—they will——"

"Your friends," he said with some bitterness. "Could they say more than my friends said when——"

"But I am innocent," she pleaded. "The disgrace will not fall on him, but me. I will make him sign the confession," she said. "You can hold it over him. He will make restitution of your property. But do not force him to go back East; let him go somewhere—anywhere—but let him live. For, after all, he is my father—the only one I ever knew."

"But my vengeance," he said, the bitternesss of his smile softening as he looked at her.

"Your vengeance?" She came close to him, looking up into his face. "Are we to judge—to condemn? Will not the power which led us three together—the power which you are pleased to call Fate; the power that blazed the trail which you have followed from the yesterday of your life; will not this power judge him—punish him? Please," she pleaded, "please, for my sake!"

He looked at her for an instant, the hard lines of his face breaking into gentle curves. Then he nodded and she

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came forward and, placing her hands on his shoulders, bowed her head and wept softly.

* * * * *

An hour later, standing side by side in the doorway of the cabin, Sheila and Dakota watched in silence while Langford, having signed a confession dictated by Dakota, mounted his pony and rode slowly down the river trail toward Lazette. He passed the timber clump near the cabin, and with bowed head traveled up the long slope that led to the rise upon which, in another time, Sheila had caught her last glimpse of the parson. It was in the cold, bleak moment when darkness has not yet gone and the dawn not come, and Langford looked strangely desolate out there on the trail alone—alone with thoughts more desolate than his surroundings.

Sheila shivered and moved closer to Dakota. He looked down at her with a grave smile.

"It is so lonesome," she said.

"Where?" he asked.

"Out there—where he is going."

He did not answer. For a long time they watched the huddled form of the rider; they saw him approach the crest of the rise—reach it. Then from the mountains in the eastern distance came a shaft of light, striking the summit of the rise where the rider bestrode his pony, resting on him—throwing horse and rider into bold relief. For an instant he halted, turned, glanced backward a moment, and was gone.

(THE END)

A RHYME OF LITTLE FISHES

By C. L. GILMAN

FOR even little fishes let
  The Red Gods have your thanks.
Though all you want you do not get,
  Rejoice you don't draw blanks.

For better men than you, by far,
  Have fished the whole day through—
Yea, fished like—what someone called
    war—
  And caught far less than you.

To-morrow can't bring luck more bad
  To you, and anyway
You should be glad that you have had
  A chance to fish to-day.

So e'en for little fishes give
  The Gods your hearty praise
That they, in turn, may let you live
  A heap more fishing days.

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SHELTER AND BEDS IN THE WINTER CAMP

By WARWICK STEVENS CARPENTER

Useful Hints for the Man Who Wants to Sleep Warm and Dry in Cold Weather

A TIGHT camp of some sort is by all means the most sensible shelter if one is to remain long in the winter woods. It will have far more conveniences, such as tables, benches or chairs, bunks, a stove, and perhaps even a fireplace. But far more than these conveniences you will appreciate the freedom for relaxation which the snug, closed walls of the cabin afford. The moments when you let go at every point and loaf indolently in the comfort of the home camp are among the most delightful of an entire vacation. In an open shelter in severe weather this is never possible. The cold never relaxes and you must keep constantly on guard against it. Nevertheless, the fullest taste of the wilderness comes only to him who at times meets the Red Gods hand to hand and under all sorts of conditions, in winter as well as in summer, in cabins, tents, lean-tos, and in hasty and impromptu bivouacs. Even the tents and lean-tos in winter may be made cheerful and comfortable until a driving blizzard sets in or one of the winter thaws commences, with its cold, penetrating rain.

The cabin may be your summer camp, furnished with stove, dishes, and beds, with blankets stowed away in tight chests, and everything except food in readiness for a flying winter visit. The winter camper is fortunate who has such a wilderness refuge. In default of this you may find some abandoned chopper's or trapper's camp hid away in the recesses of the woods and furnishing chiefly four walls and a roof. Perhaps it will have a stove in more or less dilapidated condition. It will not be large and will be easily heated. If the roof is not tight it may be quickly made so if you are able to take a roll of roofing-paper and a few nails. If you know that windows will be out, take a small roll of white wrapping-paper and some tacks and then grease the paper when you put it in with lard or bacon grease, to give it greater translucence.

One of the buildings of an abandoned lumber camp may make an ideal place for a winter vacation. If the camp was large there will doubtless be a small building, an office which was used by the boss, which you can occupy. At times, however, nothing but a big barnlike structure will be available, with no small room shut off by itself. To heat such a place is out of the question, but a portion can be almost always cut off by hanging up a tent or a fly. I have frequently shut off small portions of lumber camps in this way, thus making one section by a window as warm and snug as any cabin. One should know, if possible, what he is going to before he starts and then prepare to establish himself properly.

A folding camp stove in such a place will be worth its weight in many other luxuries. They may be had in various styles and sizes, from a few pounds up to twenty or thirty.

In tents for winter use there is very much choice. The chief summer talking points hold good, such as roominess inside, ease of putting up, whether with one pole or many, or with a ridge rope, and whether they are easily heated from a fire in front. The folding camp stove inside will be equally serviceable in any

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of them. In winter we must consider in addition the shape of the roof. A very slight slope will shed water in summer, but a fairly steep pitch in winter will catch and hold the snow until the tent sags down over one's head inside and cramps the room beyond all endurance.

Tents with the steepest roofs are conical tents, with and without a wall, tents in the form of a pyramid, known as miner's tents, with and without a wall, the common A tent, and certain forms of canoe and other special tents too numerous to mention. In selecting one for winter camping the steeper the slope of the roof the better the tent will be.

The Useful Baker

An excellent tent for cold weather is one known as the baker tent. It may be opened in front along its full width to the heat of the fire and its roof is sloped at about the angle of the folding camp baker, so that it reflects the heat and throws it downward into the tent. The flat roof, however, catches every flake of snow that falls. It may be braced up effectively with a framework of poles, but I prefer to build the framework outside and thatch it thickly with boughs, so that the snow never reaches the tent.

I have never yet seen a tent that worked satisfactorily with a rope ridge. They are fairly good in summer and are certainly easy to set up, but are extremely slovenly in appearance, as no rope ridge will remain sufficiently tight, especially under a weight of snow.

Instead of using a rope ridge, tents should be set in winter with a pole between two trees, or supported on forked sticks, and the tapes along the ridge should be tied to this pole. If the tent has no tapes, run the pole through the tent from end to end and support it at each extremity with a forked pole. Better still are two forked poles at each end, the bottoms of which are spread far apart. When the tent sags it can be tightened up by drawing the bottoms closer together and thus raising the ridge. Poles spread apart in this way also add much to the stability of the tent in a wind. While this method requires five poles instead of three, it is nevertheless the best way to erect an A tent. It will be difficult to drive stakes in winter, but logs to which the ropes may be tied will serve nearly as well.

Tents may be heated by a fire in front, but they will be far more comfortable in real cold weather if supplied with a folding camp stove. For this purpose asbestos rings to receive the stove-pipe can be sewed into the roof. Tents thus equipped and pitched in a thick cover of trees are nearly as comfortable as cabins.

In pitching a tent or building a lean-to all the snow must first be dug out clear to the ground in the space to be occupied by the camp. Clean and level the ground where the bed will be, as in summer, being sure to level down all hummocks with the broad part of an axe. Use the snowshoes for pitching out the snow. If it is tightly packed and there is much crust break it up thoroughly with a stick.

Perhaps last summer's lean-to can be dug out and refinished for the winter camp. In building a new one it may be that two neighboring trees with convenient crotches can be used to support the ridge pole. In default of them use forked poles for supports. The whole underlying theory of the lean-to, in which nails and ropes are entirely unnecessary, is that of forked supports and braces. Hold up each end of the ridge pole with two forked sticks the bottoms of which are drawn apart a little, one to the front and the other to the rear, both of the butts being placed a little out to one side. The ridge pole should be about five feet from the ground. On it lay the small ends of other poles, with their butts on the ground about seven feet back. Put several cross-poles over these and thatch the whole top thickly with spruce and balsam boughs.

It is better to shingle the tops much thicker than in summer, to keep the snow from sifting down. If a water-proof pack-cloth is spread over the roof poles and a few boughs over that, the boughs will take and distribute evenly the weight of the snow, while the cloth catches any drip from snow melted by fire. The roof is pitched at an angle which is de-

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signed to catch much of the heat from the fire, so that snow is frequently melted even through the cloth. The back of the lean-to should be in the direction of the prevailing wind. Then thatch the sides thickly with boughs and bank snow lightly against them. Snow will not melt on the sides and will keep out stray draughts. A palisade of boughs banked with snow and built along the sides of the open space in front, between the lean-to and the fire, will serve as a further protection against the wind, as well as hold in a considerable amount of heat from the fire.

There is a form of lean-to made with a pack-cloth and boughs which I designed and have used frequently. It uses less poles than any other and is much quicker and easier to put up. Have a long ridge pole, about ten or twelve feet long, the back end of which rests on the ground. Support the front ends with two forked poles about seven or eight feet long, the butts of which are spread far apart on either side, so as to give a clearance in front of about four and one-half or five feet. Place two other long poles with their butts on either side of the ridge and about three feet from it and let the front ends rest on the two forward supporting poles.

Throw the pack cloth over the ridge and have tapes along its sides which can be tied to the side poles. The butts of the side poles can then be driven into the snow as far apart as the cloth will permit, thus keeping the cloth tight at the back, and the front ends of these side poles, in their tendency to slip down the forward supports, will automatically keep the balance of the cloth well stretched. It is also advisable to have a tape on each end of the cloth to tie around the ridge and the supporting poles and around the ridge at the back, thus keeping the cloth tight on the ridge. Thatch the back and the sides with boughs and bank with snow.

Practically this identical arrangement may now be obtained in a tent known as the Forester's tent, except that light waterproof material is substituted. Instead of thatching with boughs there are side walls which slant down to the ground and are secured with stakes or by tying to logs. These side walls make it possible to dispense with the two side walls. This is one of the latest and most convenient tents made, is not much affected by accumulated snow and is easily heated by the fire in front. It may have a cloth front added and be used with a stove, although it is not a very conveniently shaped tent for that purpose, its chief utility being with an open fire.

Possibilities of the Wigwam

Another form of shelter that is excellent for winter use is the Indian wigwam. It is made by cutting a quantity of poles about twelve to sixteen feet long, according to the height desired, and all of even length. Several of these should have very large forks at the small end. Place those with the forks together at the tops, with the butts spread out in the form of a circle, from ten to sixteen feet in diameter. Lean others into the forks until a fairly close framework is made in the well known form of the Indian tepee. Over these spread a covering of canvas or old tenting, or, if you like, have a light waterproof cover specially made for the purpose. It may be tied to the poles at the top with a tape, though this is not necessary. Over the outside of the cover lean other poles to hold it down in the wind. Bank around the bottom with boughs and snow to prevent draught on the floor. Have a flap for a door.

If the covering is not carried too close to the top, or if it is made with a flap at the top which can be thrown back with a pole, the fire can be built in the middle of the tepee and will ventilate perfectly through the opening thus made, if the flap at the door is left open a trifle and the fire is kept going with good wood. But the ventilation at times will be abominable. The remedy is to use a folding camp stove with a stove pipe going out at the peak. The tepee is then in fact a conical tent with a perfectly stable framework effectively supporting it against the snows of the heaviest blizzards.

A good bough bed affords another example of the virtue in dead air space. The confined air in the matted needles is an excellent insulation against the radiation of bodily warmth downward. If

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you touch the ground or floor at all, heat will disseminate directly at each contact point. A layer of fine light boughs on top of the blankets will decrease the circulation of air above and thus lessen radiation. On chill summer nights I have slept warmly in bivouacs with no covering but a blanket of balsam boughs. If the camp is in a cabin, beds in bunks or on the floor should be made with no less care. Beds made in snow depend for their underneath insulation entirely upon the blankets and furs.

My method of laying a bough bed is somewhat unorthodox. Kipling tells of "A couch of new pulled hemlock," and nearly every writer upon camping has laid emphasis upon the fact that the boughs should be very small. I prefer rather to cut down small trees and to take practically all of the branches from top to bottom, though if the bottom ones are too large, with very heavy butts, I clip them off a little. Balsam is the best as it is always soft to the touch and very fragrant. Hemlock is good, but more of it is required. Spruce comes next and is almost as satisfactory as balsam, but will hardly scent up your blankets to shed their fragrance on the common air of the closet at home.

Begin by laying the larger boughs at the head with curved side up and the butts toward the foot. Put several layers of them across from side to side, before working downward at all, then drop toward the foot with still other layers, the soft tip ends of which will lap thickly over the springy bows of the boughs in the layer above. Continue in this fashion to the foot of the bed and then stick the finest boughs upright as thickly as possible over the whole, but with their tips inclined slightly to the head. The matted needles on the ends of the boughs will be like a soft mattress which is laid upon springs. A thick layer of small boughs can be laid across the bed at the head to raise it slightly higher for a pillow.

Beds laid on the ground will hold up longer and be warmer and more comfortable if logs are placed at the sides and head and foot. The same is true on the floor of a cabin. Bunks should have sides and head and foot boards for the same purpose.

Out of the wealth of his woods' experience Edward Breck has written an article on Running Rapids. "White Water" tells all about that kind of canoeing.

KEEPING DUFFLE DRY IN THE CANOE

BEFORE loading their duffle into the canoe the Boise Fort Ojibways, and I don't know how many others, prepare a bed of brush or small branches for it. In thickness this bed varies according to the rate at which the canoe leaks, as all birch-barks do, and the distance to the next portage. While leakage is not a common trouble with the white man's boat the accumulation of rain or spray makes this brush bed a desirable thing when traveling in the rain or across rough water. With a poncho or tarp over the duffle and enough brush beneath to hold it above the "puddle" it is possible to keep grub and blankets dry through the most drenching storm or the wildest white-caps. At the portage it is a simple matter to discard the "brush heap" at the landing and renew it at the take-off either with fresh cut stuff or from the almost inevitable pile of branches discarded there recently by preceding voyageurs.

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THE TRICK OF SKI-JUMPING

The art of ski-jumping is not so easy as it looks before trying nor so hard to learn as it might appear after the first attempt. At the start, or takeoff, come down as though you were coasting on the ski, then at the moment of the takeoff bend the body well forward from the hips and throw as much of the weight as possible into the knees. As you leave the edge of the jump, straighten quickly at the hips and secure as much as possible the effect of jumping straight out into the air. While in the air hold the arms as still as possible in the position that best preserves the balance, keep the ski points slightly down, as near as possible parallel with the slope of the hill. The body should be perpendicular to the slope and the skis kept well together. On landing, advance one ski as far as possible without upsetting, bending the knee of the leg that is advanced. Keep the skis together and parallel. The rest is practice—and more practice.

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SOMETHING NEW IN FLASHLIGHTS

PHOTOGRAPHS BY MRS. HOWARD T. COLBY

THE six photographs that follow are the result of a combination of time exposure and flashlight. They were taken by Mrs. Howard T. Colby in Maine last fall, some of them after the hunting season had opened. In every case the pictures were made from a blind at the edge of a clearing and not from a canoe as is the usual practice. The camera was placed in position on a platform and as soon as it became dark the shutter was opened and left open, sometimes for two or three hours. The jack lantern used was the ordinary type for such work. This method has resulted, as the photographs show, in a greater definition of the background than usually appears in the ordinary flash with its dead black surroundings. In the daytime deer were rarely seen so near the camp, but the clearing in which these pictures were taken was a favorite feeding place for them at night.

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"WHAT WAS THAT YOU SAID?"

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"DID I HEAR SOMEBODY CALLING?"

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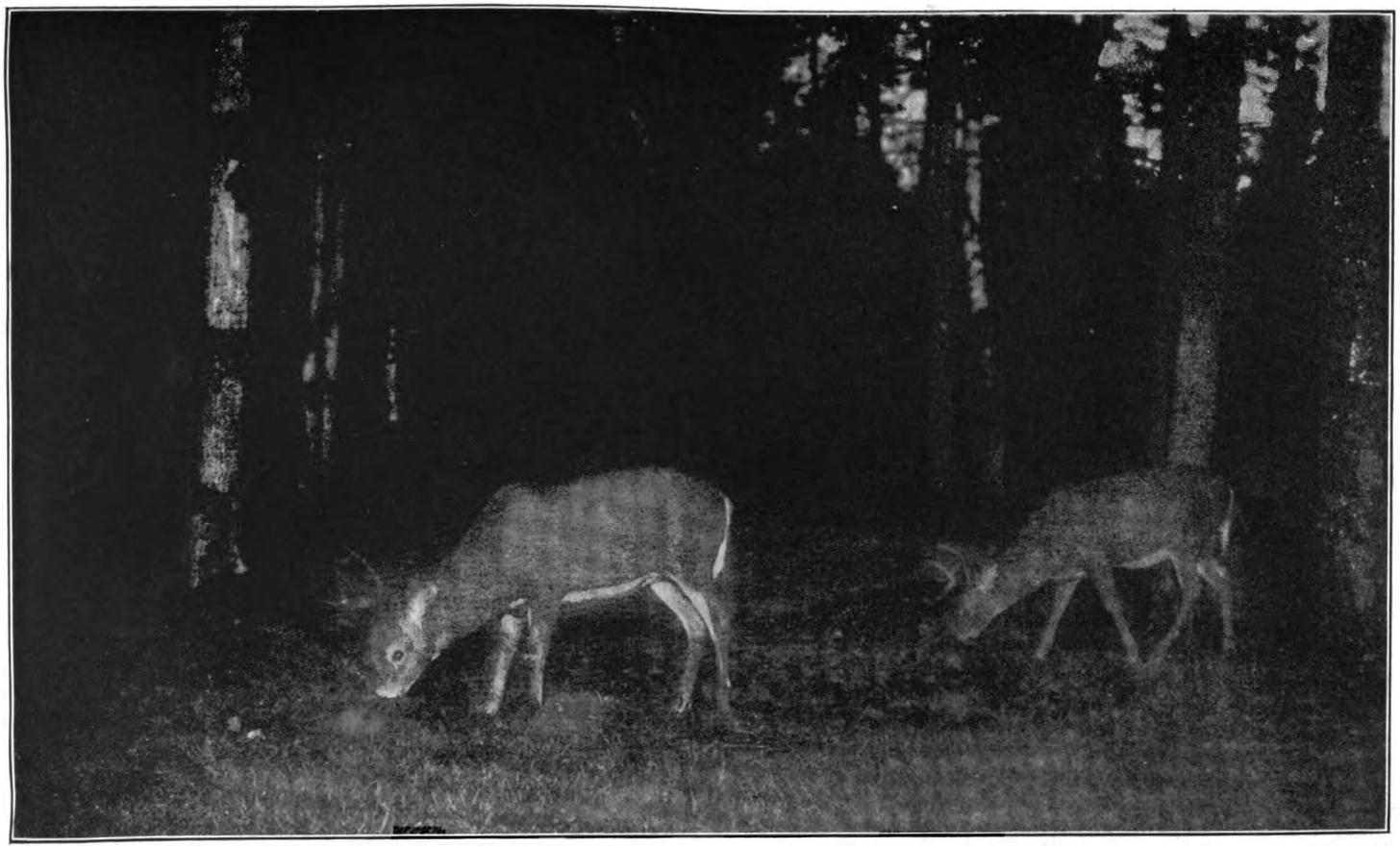

"IT'S A SHAME TO BREAK IN ON A FELLOW'S DINNER"

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"NO, I'M NOT FRIGHTENED, BUT—"

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"NO CHANCE FOR A QUIET LITTLE CHAT ANYWHERE"

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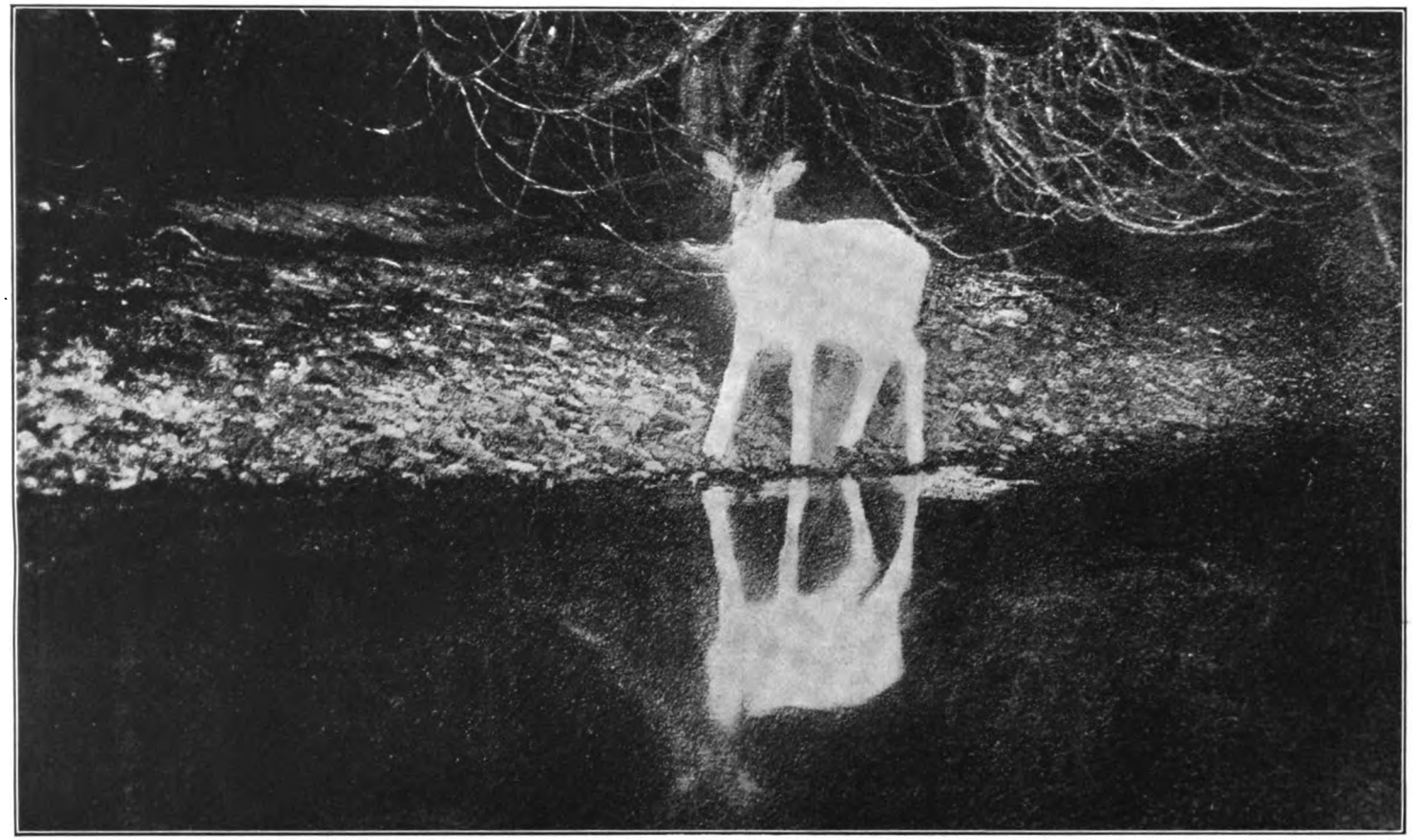

WHITE SPIKE HORN BUCK—VERY RARE. THE HAZY EFFECT IS DUE TO UNUSUAL HALATION ON ACCOUNT OF THE COLOR OF THE DEER

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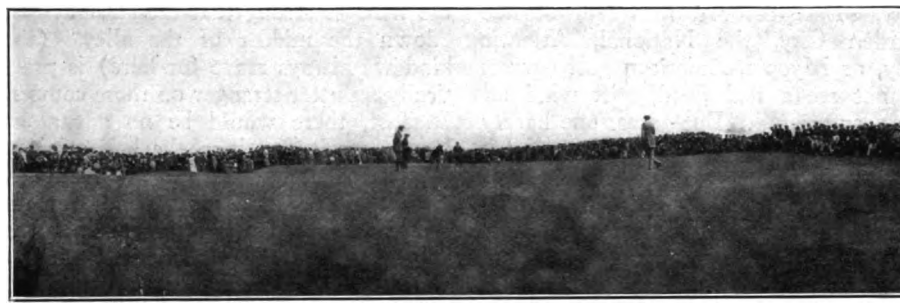
BRITISH GOLF AND GOLFERS

By HEINRICH SCHMIDT

ILLUSTRATED WITH PHOTOGRAPHS

How Differences in Climate and Character of Courses Have Made a Difference in the Style of Play



A TYPICAL GALLERY OF GOLFERS WATCHING AT THE BIG 5TH GREEN AT ST. ANDREW'S, THE LARGEST GREEN IN THE WORLD, BEING ABOUT 80 YARDS SQUARE!

LAST summer Mr. Schmidt was the sensation of the British Amateur Championship at St. Andrew's. Though he failed to go through to the finals, he was a strong contender and gave a better account of himself than any American who has appeared in the great British event, with the exception of Mr. Travis. He spent practically the entire summer on the other side, meeting most of the great English and Scotch players and playing on practically all the better known courses. His article is a first hand statement from an accurate observer.

ALTHOUGH the game of golf is golf all over the golfing world, it is not played in exactly the same way, nor under the same playing conditions, nor are the results obtained precisely the same the world over. The two central people in the world of golf are the British and the Americans—and each people claims the supremacy in this field of sport. Golf in America is quite distinct in character from foreign golf: by foreign is meant Scotch, English, and Irish; the Continental golf does not cut any figure, since it is but in its infancy, having but a few good golf courses and still fewer good golfers. The difference in the golf on the two sides of the Atlantic is due mostly to climatic conditions, which conditions have some bearing on the construction of the courses, and, what is more important, affect the stroke of the player himself, in respect to both form and results.

The most noticeable feature of foreign golf is the location of the courses. The foreign courses are mostly on the sea. Since the really good inland courses are but few in number, the seaside courses may be considered as being typical. These are generally very flat and

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windy courses, with abundance of natural sand-dunes for hazards and wonderful undulating seaside turf—rolls which the sea itself put into the surface years and years ago. The soil is naturally very sandy and makes golf a real pleasure, since the turf is thereby made porous and soft to walk over.

Our courses, on the other hand, are what are known on the other side as "inland" courses, which are usually located in sheltered, even wooded sections, and the ground contour is invariably hilly. Except for a few courses, like Garden City, the National, Atlantic City, or Myopia, American golf courses do not see a real good, stiff wind all the year around. But across one hardly ever plays in a quiet day—a kind of day which spoils the day's golf from a golf point of view, since a great many golf courses of quality are fine courses simply because a prevailing stiff west wind makes the course a fine test of golf; or it may be an easterly that changes the course entirely.

The wind is, however, the chief difference in the playing conditions, and the wind is invariably blowing what we would here call a gale, but which on the other side is merely a breeze. The effect of playing in a wind has its effect on the stroke and even the player. It takes strength to play in a wind; strength to push the ball through the antagonistic wind, and strength to stand up or brace one's self against it. The result is that the players as a rule are well developed, and the stroke becomes exceptionally powerful. The swing is both full and snappy, and the power not only comes from the arms, wrists, and shoulders, but from the back itself.

One has but to watch a full "St. Andrew's" stroke to get an idea of what is meant by putting one's "back" into the stroke. It seems as though every part of the body plays its part, so that the first impression is that the player has "pressed" the shot. But upon watching the flight of the ball which results from this full and graceful "swipe," one realizes that the shot was perfectly timed and that every bit of strength put into the stroke was utilized. It does not seem possible that they could hit harder with their wooden clubs! But a ball must be given momentum to live at all in those stiff winds, and to get this they must hit hard. The wind is so stiff at Hoylake, sometimes, that even a long hitter like James Braid is obliged to be satisfied with about a one hundred and fifty-yard drive at the elbow sixth hole. And just such gales of wind make these long and heavy hitters, the kind that one soon gets accustomed to see on any golf course abroad.

The seaside courses are so open and the wind so strong that the straight ball "down the middle of the alley" (the kind we always crave for here) is practically an utter stranger on those courses. In fact, there would be no advantage in even trying to keep the ball straight in most cases, but really a disadvantage, since the ball in a cross wind, for instance, would be fighting against the wind. Instead, the wind is made a friend and is used to advantage by employing the useful hook and slice (according to the direction of the wind) to work with the wind—and a long ball usually results. Those hard hitters who can play a reasonable hook or slice certainly do some really fine smacking. They know how to start the ball for the right place, at the proper height, and with the proper degree of slice or hook imparted to it so that it usually ends up in the right spot a considerable distance past the place arrived at by the man who only plays the straight ball and simply allows for the wind.

The wind may perhaps be a stiff one from the east, or perhaps from the west, so that one is bound to learn how to pull or slice at will. This feature of the long game is one that we do not as a rule know much about, simply because we have no real occasion to employ it. But it is the one distinguishing telltale which makes a golfer a real player or only a mere golfer on the other side of the Atlantic. In order to cultivate this art and make it worth while the courses seem to be laid out so as to give the long hitters the well-deserved advantage they ought to have. It is said that the reason why so many of our players fail in the competitions on the other side is this wind play which the American is not used to—it is

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entirely different golf from what he is accustomed to.

About the windiest course abroad is Princes, and St. George's Sandwich, next door to it, is just about as good in that respect. Princes is such a fine test of golf that it is Harry Vardon's first choice. Sandwich, where the Amateur is to take place in 1914, is perhaps the best illustrative course for wind play and the effect of the wind on the type of play required by this very exacting course. It is quite an accomplishment to drive a beautiful low wind-cheater when it is most needed; and the art of slicing or pulling at will is just as great an accomplishment. But here at Sandwich the so-called fine art of driving is brought out exceptionally well. It is not sufficient to get a hook when desired, and to keep the ball down out of the grip of the wind; here the element of height must be considered also. This seems to be the height of the art of driving: to drive a perfect ball in a gale of wind with the proper degree of slice or pull, and at such a height from the ground so as to just carry an imposing sand-dune bunker, which is placed so that it would catch a well-hit (and well-meant) wind-cheater. The length of shot or carry is also considered most carefully in the construction of the British courses, and Sandwich and Westward Ho are known for this one feature.

PLUCKY MR. JOHN BALL PLAYING WITH ONE HAND—A SINGLE HANDED FINISH DUE TO A SPRAINED RIGHT WRIST

Hence we see that the wind and courses are entirely different from what we expect here in America. With these added difficulties the foreign golfers have an advantage over us, a great advantage which cannot be remedied. The result is that the British golfers can play and play exceptionally well in any kind of a wind; they know by experience how to play these, to us, difficult shots; and by experience they have polished these shots so that they are pulled off successfully nine times out of ten. Put a player who knows only clear weather against a wind-experienced golfer and the result is hardly ever in doubt. It takes a wind to show up a man's game; he either knows a great deal, or nothing at all, and it takes but a few holes to find out

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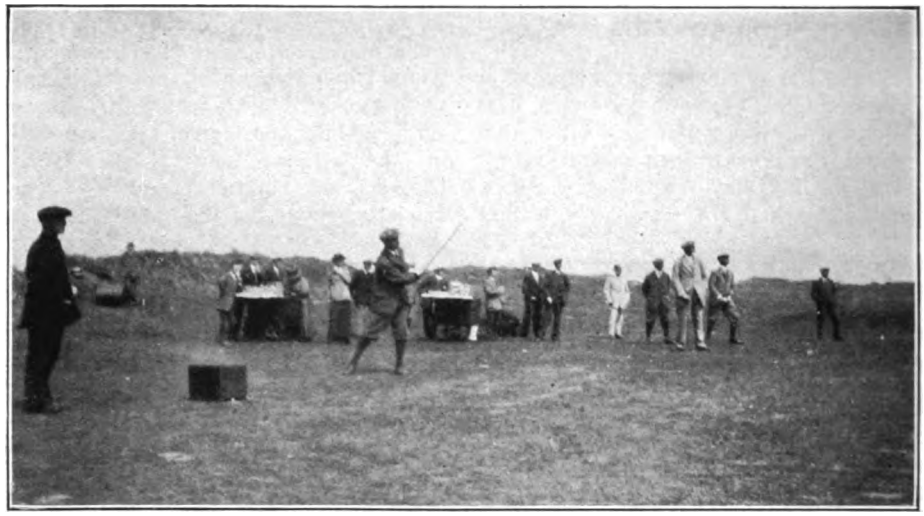

WHERE A MAN MUST ALLOW FOR THE WIND OR SEE HIS BALL CARRIED FAR OFF THE LINE

which class he belongs to. This is the bugbear that the Americans have to contend with when playing in foreign competitions.

But there is still another feature of the courses which make the good results of the "wind player" stand out even more brilliantly than seen at first glance, and that is the difficulty the good player is made to dodge—the courses seem to be made for the best players. The players on the other side are invariably straight players who can place their shots accurately; this is due to the exceptionally fine trapping of the long shots. To the American who studies a particular kind of shot and has mastered it so as to get what he considers a perfect shot somewhere near the pin, and finds the ball in a bunker from a two hundred and sixty-yard drive, the situation certainly looks unfair, but only momentarily, since his partner (a foreigner) will play next and place the ball not only far but sure and clear of trouble. This is a training that we are not obliged to go through. But even then there are a great many foreigners who are obliged to take their irons so as to place the ball short of trouble where the space is considerably wider; they, as do a great many of our golfers, sometimes prefer a more difficult second than a risky tee-shot. But as a rule the British golfers are straighter and longer long-game players than the Americans.

Another element is the everlasting rain that the foreign golfers have to contend with. An occasional shower or two during a round of golf is not extraordinary but quite the rule in certain seasons. And in some seasons it does nothing but rain day in and day out. But the weather does not in the least interfere with their going out for a day's golf—they simply dress for it. The most surprising thing is the fine golf played in the wind and rain by even the most inferior players—they play around the course in about the same figure on these bad days as they do on clear days. The wind and weather, besides the much cooler climate, make it a necessity to wear a coat or sweater—the coat being the most logical garment, since it keeps out the wet and is far more comfortable in all kinds of weather. The knickers are also more comfortable than the long trousers, and (with heavy stockings) look far better on a golf course.

The professionals nearly all wear long trousers, while the amateurs practically to a man wear the knickers, the distinction being apparently as great as between a sport and a business, and knickers certainly look sportier than the trousers. Another distinguishing feature of the dress of the amateur and the professional

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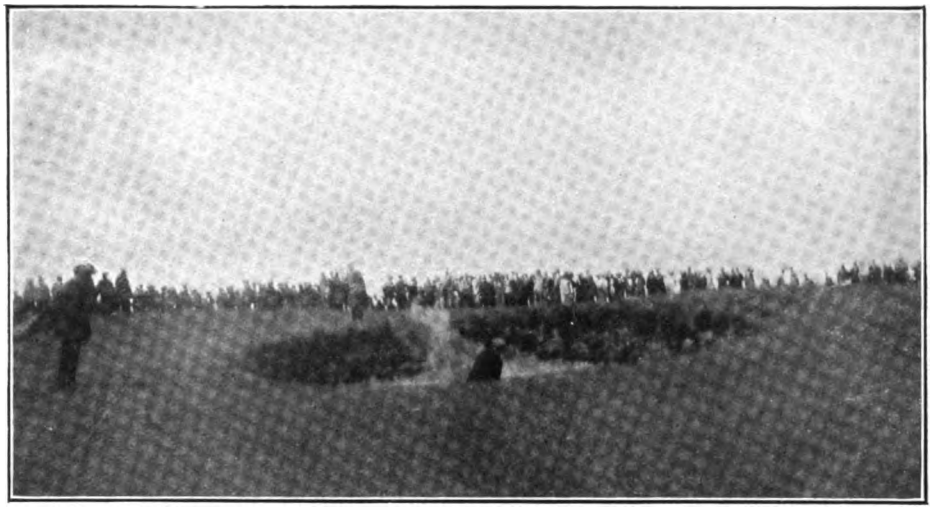

MR. HILTON PLAYING THE "DUNCH SHOT," THAT MEANS "OUT IN ONE" WITH NO DESIRE FOR DISTANCE

is the shoe. A great many of the professionals wear the box-toe style of shoe, although some wear the popular brogue pattern affected by the amateurs. The amateurs, however, wear tasseled tongues on their shoes—a practice not indulged in by the professionals. All of the footwear on the other side is much heavier than ours. This is due to the wet weather and the soft soil, which allows the wearing of heavy leather uppers and thick soles. These shoes are most comfortable in wet weather and are fine for getting a foothold on the course, which is either wet or so sandy that a firm grip may be obtained by simply wriggling the feet. Our courses are very hard as a rule, so that a great many of our golfers go so far as to wear tennis shoes, which permit the whole bottom of the foot to grip the surface of the soil with the aid of the thin rubber soles.

Rubber soles would not do at all across the Atlantic, since they would not be suitable for the wet weather. However, large rubber studs are sometimes affixed to the bottoms of the heavy-soled shoes; this makes a shoe which is perfectly good to wear even in the clubhouse. But the usual practice is to use iron studs which serve two purposes: to give a firm grip, and also to place the weight into the soles. Some golfers go so far as to have lead inserts placed in the heels so as to keep the weight on the heels. The wearing of heavy woolen socks is a common practice, and makes playing on sandy courses, or bunker play, far from discomforting; the sand which does get into the shoes simply imbeds itself in the socks, so that the sand is never felt between the feet and the shoe proper. This is quite a stunt and well worth remembering.

The British golfers hit much crisper irons and with less exertion than we do. The results are no better than ours, but they get them in a more finished style. They learn to hit with their irons, and not push as so many of our players do. British golfers start early in life, so that they cultivate a wonderfully free and effective iron stroke. They start with few clubs and master those few in all possible phases before trying any others. The caddies, of the younger generation as well as the older, have beautiful strokes; in fact, many of them can play better than the man they are carrying for. The young caddies find great delight in taking a waggle or a swing with a club before putting it back into the bag—and they know a good club when they see one.

At Hoylake, at the 18th green, a young chap of about ten was practising with his "man's" mashie. First he pitched the six balls he had toward the

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THERE WAS A LOT OF ENGLISH WEATHER AROUND WHEN MR. HILTON AND MR. HARRIS FINISHED THE FINAL AT ST. ANDREW'S LAST YEAR

pin, and holed them out with the same club for a total of twelve—all this from about thirty yards from the pin. He then picked them up and went to the same spot and ran them up with the mashie. A total of twelve again resulted, showing that the chap knew both departments of the approach (not to mention the good putting executed with that same mashie), and furthermore knew how to get both with the same club.

But starting young is not the whole story; since they have so many good players to watch and copy, they are not naturally self-made golfers. There are so many courses, exhibition matches, and such a large number of good golfers that the young as well as the old have a wonderful chance to learn from observation, and to learn it from the best of sources (like Vardon, Braid, Taylor, and others). It is easy enough to pick out a golfer whose stroke is somewhat like one's own, so that one can easily work into a stroke which will bring results. They see so much good golf that they are all connoisseurs—that is easily seen and appreciated in looking over a golf gallery and hearing the remarks made by these spectators. It is surprising to hear some of the "mere golfers" tell someone how to correct his slice, or how to cut his mashie shots, to pitch with or without a cut, or any of the principles of the shots. They can tell you absolutely what the principle is, although they perhaps cannot execute it themselves.

One of the most noticeable differences is seen in bunker play. Here there seems to be a great tendency toward picking the ball clean from a trap or bunker, and sometimes a considerable length can be got from a bunker shot. But across one seldom, if ever, gets a chance to pick the ball up clean, since the bunkers are of an entirely different type. There the golfer invariably plays the so-called "dunch shot," in which he simply explodes the sand underneath the ball and pops the ball out lifeless for only a few yards or so. In other words, the British golfer prefers to play the wise game of "out-in one," and from the looks of some of those terrible pits this is the best and practically the only plan to follow. And these golfers know just how to play the shot, taking the right amount of sand and dropping the ball on the proper spot from the very worst of bunker lies.

Mr. Harold H. Hilton played one of the prettiest "dunch shots" at the 17th hole, after he put his third into the road bunker. He was not in very bad, but the chances of staying in the bunker or going over the very narrow green (only about twenty feet wide from the edge of

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the bunker to the farther edge of the green) were very great. It did not take him long to pop that ball directly into the very middle of that green, as safe and dead as though he had tossed it up there by hand.

The play from off the fairway is also entirely different from what we are accustomed to, the rough consisting of heather, or sea grass, from which it is most difficult to jerk a ball. It is remarkable to see what long shots can be made from that woody heather; Braid or Ray find it no difficulty at all, since they can get a one hundred and fifty-yarder or more with apparently no exertion, but they have the build and strength for it.

The only weak part of the game as it is played abroad seems to be the putting. The contention is that the foreigners do not putt well because they hit their putts or rather stab them, and do not follow through with a sweep as our best players do. They get this stab from their iron play, since they learn to hit their irons, and they do the same with their putts—snap the stroke. The putting cleek is also said to make them do this, whereas if they used an aluminum putter of greater weight they could not hit but would have to sweep their putts. Be that as it may, they do not play this department of the game anywhere near as well as they do all the others.

PINCH PACKING

By C. L. GILMAN

PHOTOGRAPHS BY THE AUTHOR

Some Talk About the "Turkey" and the Extemporaneous Tump-Line

WHAT ingenious lumberjack first jammed his battered belongings into a canvas grain-sack, tied one end of the rope which secured its mouth to one of its lower corners, and slung the pack thus simply contrived over one shoulder, history does not record. Neither does any record show when or why this primitive duffle-bag came to be called a "turkey." But "turkey" it is, and by that name it is known, whether one fabricates it on the instant from a piece of trolling line and a moldy gunny-sack dug out of the ruins of an abandoned log stable or pays two bits to a Duluth pawnbroker for a more sightly but less rugged affair of white duck, cotton rope, and brass grommets.

It has one variant of high esteem among the lumberjacks, though of merely human interest to the sportsman, namely, the "blind turkey." This is a sack stuffed with rags or waste, "deaconed" with a tattered pair of overalls and part of a pair of shoes, and designed to deceive those labor agents who decline to ship laborers who have not baggage to stand hostage for their arrival at the job.

While the "turkey" is hardly convenient, substantial, or comfortable enough to be regarded as a formal addition to transportation equipment, yet the man who knows how it is made has a good mental reserve against packing emergencies. Any backwoods storekeeper will sell the makings of a "turkey" for about fifteen cents. In fact, most of them will refuse compensation entirely, particularly if the "turkey" is to contain a fair amount of stuff purchased from them.

The one greatest objection to "turkey" in the raw is that it falls into the undesirable class of packs supported by one shoulder only. If the load is heavy, or the hike long, this defect is so easily remedied as to be negligible. Just find

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A BELT AND SOME ROPE MADE A SERVICEABLE TUMP-LINE

the center of balance on the shoulder rope and put the knife to it there. Close the gap with a bandanna handkerchief knotted to the rope ends at diagonally opposite corners. Fold the handkerchief to a thickness comfortable to the forehead and you have evolved that most primitive and satisfactory packing device —the tump line.

The great beauty of the tump line is that you can carry it in your head. So long as you are wearing about the average amount of clothes, you can always be sure that you have about you the materials for a "tump." Boxes, bales, and bundles which refuse to fit into the ordinary packing apparatus yield gracefully to this aboriginal method of carrying. But its main beauty is that, while you may not have with you packsack, rucksack, pack-basket, or pack-harness, you always have a tump line—if you possess anything remotely resembling some kind of a mind.

With two belts and a necktie I've bound up and packed comfortably all the long, cumbersome wraps of a stranded automobile party. Two bandannas and the head-strap from my packsack brought to terms a fifty-pound roll of tar-paper which balked at the portage on the way to my shack. A woven web army belt and a couple of four-foot lengths of clothesline, ordinarily used for anchoring the canoe, accounted for five or six hundred pounds of packing cases, ammunition boxes, camp stoves and general "permanent camp" cumbersomeness which huddled helplessly at the wrong end of my portage one morning. And while the proprietors were smoking their after-dinner pipes, a little rough work with the needle resulted in a stout canvas headband with four-foot ropes firmly attached for their use on the portage next below.

Even that man-killing incubus denominated a "carry-all" in the sporting-goods store, and damned as a "duffer's bag" on the trail, can be approached from this direction. Generally it has a ponderous surcingle wrapped the wrong way around it, which can be let out to its last hole and used as a head-strap.

Further enumeration of instances, however prolonged, probably would

TOTING THE "TURKEY"

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never cover the coming pinch in which you will find either the tump line or the "turkey" the way out. Neither device can be argued superior to other packing methods. But they have this virtue in common, that so long as you know what the "turkey" and the tump line are, and how they are used, you can always be sure of having one or both of them at your service when the emergencies of the trail demand extemporaneous packing.

THE MAN IN THE TONNEAU

By ALBERT HARPER

Some Sound Advice from the Standpoint of the Man Who Does Nothing but Ride

AFTER all, the real motorist is the man who sits in the tonneau and does nothing. I know, for I am that man. That's as near as I ever come to running a car, and there are times when it's pretty close at that. For example, there was the occasion when the other fellow went to sleep at twenty-five miles an hour near the end of a hundred-and-fifty-mile run. To be sure, he had been trying to hunt 'coons all night the night before, so there was a semblance of an excuse for him; but it put it right up to me, for all that. What did I do? Not a thing. That's the beauty of being the Man in the Tonneau. Fortunately it was only a very small cat-nap, hardly half grown, and there was nothing in the way. The rest of the trip, however, I rode in front with a sharp eye on the man at the wheel.

Don't think for a moment that there isn't a certain art in being a successful motorist in the tonneau. The first requisite of all is entire complacency founded on a fine show of confidence in the man who is running the car. You may not feel that way at all, but you must seem to, for all that. The man who is constantly craning his neck to see what the speedometer is remarking about it all, or indulging in half-articulate exclamations every time the chauffeur seems to be shaving the other cars a trifle close is an unqualified nuisance.

Perhaps you remember that spinster aunt who was never able to refrain from grabbing at the lines every time the old horse shied at a piece of paper. Well, that's the nervous man in the tonneau to the life, and if the chauffeur doesn't dump him out at the first opportunity it won't be because he doesn't want to. Just bear in mind that you can't prevent the accident from happening, and that by the time you know about it—if there is any—the accident has happened or is safely avoided and your jumpy nerves will quiet down wonderfully. Besides, what are you going to do about it? By the time you have climbed over the chauffeur, thrown the carburetor into reverse, set the friction clutch on the magneto, and kicked the speedometer in the face, the whole outfit is probably roosting on the reverse side of the hedge with the heaviest parts and accessories of the late automobile distributed around over the tenderest portions of their anatomy. So sit still and let 'er rip.

Rule number two is: Don't talk to the chauffeur unless he begins it. This doesn't apply to leisurely ten-mile-an-hour strolls, but you aren't toddling along at that rate all the time, even if the sign-boards do advise it. At a fairly high speed there are lots of things that are easier than carrying on an animated conversation. For example, you might keep an eye on the telephone poles and wonder what it would feel like to be wrapped around one of them.

Another good rule is not to begin to wonder where you are going to stop for lunch. Perhaps you aren't going to

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stop. Besides, if the owner is driving the car he may not like to be reminded that he is expected to furnish food as well as transportation. Let him alone, and when he begins to get hungry himself he may loosen up.

Conceal Your Ignorance

When the machine balks don't make foolish suggestions or ask questions that show you don't know a spark plug from a planetary transmission. A young friend once informed me that the reason motorcycles made so much noise was that they were usually run with the carburetor off. I thanked him sincerely and have treasured the incident in my heart ever since as a useful lesson in not volunteering information on subjects with which I am not at least slightly familiar. Possibly your help may be needed to jack up the car or perform an operation on a tire. If it is, you'll be asked soon enough. The motorist who won't ask for help when he needs it hasn't been born yet.

A useful practice for the unemployed in the tonneau is to take a series of mental photographs of the road. The man who is driving has little chance to fix anything of this sort very clearly in mind, while you have nothing much to do but look around and take in the scenery. The chances are that your host may want to take that same road on some future trip and your chances of being taken along will be immeasurably increased if you have established a reputation for ability to remember where you were the last time you were there. Be on the lookout for signboards and try to catch names and distances on the fly. It's embarrassing to have the chauffeur shout back, "How far'd that board say it was to Squeedunk?" and have to admit that you weren't listening when you passed that particular corner.

Traveling in the tonneau gives you some new ideas on the habits and idiosyncrasies of the citizen on the highway. The people in the other cars don't cause much trouble, although we are all familiar with the man who loafs along at an easy fifteen miles an hour until you try to pass him and then proceeds to jerk his motor out by the roots to keep you back in his dust where you belong. He's in the same class as the old farmer of boyhood days who always woke up old Dobbin under similar circumstances and nearly ran the wheels off his wagon. Joyriding chauffeurs who picked up something beside gas at the last stop are also an unmitigated nuisance, but not nearly so numerous as you would think from reading Monday morning's newspapers in the summer.

The real obstacle—and on this point I wish to speak with frankness to my fellow man—is the pedestrian. You'd think that a man on foot could hear you coming in plenty of time to get well out of way, even if he had to climb a tree, but apparently he can't. Now don't anyone say anything about the rights of the man in the road. They're all granted, and then some. The average motorist would rather hit the ditch every time than take a long chance on hitting a fellow human being, but why not give the car a chance? Driving slowly up a well-lighted street in New York one night, we sighted a lone pedestrian coming across the street on a long diagonal toward us. He was practically heading straight for our lights. The street was almost empty, but it took three blasts of the horn to make him realize that we were on earth. Then he made a record leap for the sidewalk and hurled maledictions after us. He was in no more danger than he would have been if he had been at home in bed, but he doubtless cites that case to this day as proof of the reckless performances of the rich that ride in motors.

The small boy at the roadside is sometimes an interesting study in incipient criminality. What queer quirk it is that prompts him to hurl a handful of small pebbles at a passing car has not yet been determined. Perhaps he is in a class with the simple-minded rustic who fires a rifle at a balloon.

The most striking fact of all that comes to the attention of the Man in the Tonneau who has nothing to do but receive impressions is the helpfulness of brother motorists. The next time you are out in early spring when the frost is just coming out of the ground, notice how ready they all are with help when your car stalls to

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the hubs in the soft soil at the side of the road. They will pull and pry and tug and bemire themselves and ruin their clothes all to the end that you may presently go merrily on your way. If it's a tow you need, it's usually yours for the asking. A breakdown will speedily bring assistance unless you are so unfortunate as to have chosen a road unfrequented by your brothers.

I have purposely steered clear of the constantly unrolling scroll of beauty that is yours. That is to be assumed, else you would not be there. Anyone can find a dozen good reasons for avoiding the things that he does not like. The main text of this sermon after all is what you can contribute from your cozy corner. For the tonneau has its very real obligations. One of them is to pay your shot like a good sport when opportunity offers. Many harsh words are uttered about the selfishness of the owner who lets his tonneau go half empty when his carless neighbor could fill it comfortably. My sympathy is largely with the owner, for I have seen something of the supine, careless fashion in which the incidental hospitalities of the road are accepted by more than one passenger who could well afford to hold up his end. Roadside refreshments run into real figures in the course of a summer and if the expenses of lunches and dinners for numerous guests are added to the cost of gasoline and oil and tires and the thousand and one other items of car operation and upkeep, the accounts will offer gloomy reading at the end of the season. So pay your share and even—although this is much to ask—occasionally pay your host's share as well.

If you do this your enjoyment of the ride will be increased, your chance of going again will be doubled, and your reputation as a good sport will soar even as the price of gasoline. And these are a few of the things that appertain to the art of riding in the tonneau. There are about a thousand others.

THINGS THE WINTER CAMPER SHOULD KNOW

SLIP a glove or mitten over the muzzle of your rifle before leaning against a tree. Not only will this serve to protect the front sight, but it will also exclude from the bore dust, bark, pine needles, and—if it's that time of the year—snow. If the weather is so mild that you are not covering your hands, it's mild enough for you to lend your hat for this purpose. Even if you carry a field pull-through—which the chances are you do not—the time and trouble incident to this precaution are far less than that involved in removing debris from the barrel.

NEXT time your foot slips and the brittle, rubber butt-plate of your gun crashes against the everlasting hills and gets busted, remember that while only the manufacturer who attached that plate can replace it any crossroads country store or backwoods trading post is fixed to sell you a pair of thick, leather half-soles for a dime. Failing a store, prospect the ruins of the first abandoned logging camp you come to for the almost inevitable old shoe. A good piece of sole leather, wet and worked into shape, and neatly trimmed off with a knife and attached with the original butt-plate screws is such a good substitute for the less serviceable rubber affair that many a one has gone on as a makeshift and remained as a permanent improvement.

PEA meal soup—known affectionately as dynamite soup and commercially as "erbswurst"—either does not taste right or else does not taste enough according to a good many who are willing to concede that it is, otherwise, a satisfactory food of high concentration. The light, compact, and convenient beef bouillon cube, added in the proportion of one to a cup, imparts a pleasing flavor of meat and spices to the bland and cloying pea soup—and assuredly does not decrease its nutritive power.

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THE CASE OF THE SMALL BORE SHOTGUN

By EDWARD C. CROSSMAN

Some of the Things It Can Do and the Principal Points to Demand in Size and Model

GUN factories are managed by quite cold-blooded business men. They make guns to sell. Their enthusiasm over some gun demanded by a few cranks but without promise of general sale is like unto the chill breath that comes off the leeward side of an iceberg. Therefore when two of our greatest makers of repeating shotguns turn out 20-bores on a brand new model and entirely new frame, and a third is busy preparing for still another 20-bore, no more evidence is required that the small bore shotgun is here to stay. Every American maker of double guns makes 20-bores, and two of them make 28-bores.

From the ranks of the trapshooters, the thinking men of the clan, comes a low murmur of protest against the tremendous loads now used on the clay birds. Many of them are beginning to wonder whether the game would not be a better one, played with loads less costly, less punishing, and of an efficiency not so great that one man can pile up a record of forty runs of 100 straight or better in five years.

The user of the heavy 12-bore, or the prospective purchaser of a shotgun for the field, need fear no talk as to the small bore guns being a fad, and therefore hesitate to join the ranks of the men who are getting the most fun out of the scattergun, a walk through the racks of the greatest American double gun factory demonstrating that the 20-bore double is being made probably in the proportion of one to five 12-bores, a huge increase in the past few years.

Fashion, backed by common sense strangely enough, prescribes ever lighter guns, whether of the big game sort, or of the scattergun for field use. Theoretically there is a limit to the light weight gun if effectiveness is to be considered. One of our shotgun authorities gravely advises, in a book written some years ago, against 20-bores weighing less than six pounds. He insists upon thirty-inch barrels and recommends even 28-bores heavier than the English 12-bore game guns.

On the other hand we find a man with well-silvered hair, with a quarter century of experience in American game fields and nearly as much in looking over American gun cranks' manuscripts in his province as editor of magazines, writing enthusiastically of his experience with his 28-bore weighing five pounds and having twenty-four-inch barrels. Also he is a man well over six feet in height. Thousands of these tiny guns are sold yearly—and they must be used by someone.

Personally, after three years' use of the 20-bore in the field and on blue rocks, and after the spoiling of quite a few reams of white patterning paper, I have tied to that size gun, nor has recent experience altered my ideas.

There is no intent in this screed to dissatisfy the owner of the 16-bore with his arm if he already possesses one, but if the 12-bore owner is contemplating a change, or the non-owner has a game gun in mind, then I cannot recommend the 16. The 12-bore, still the standard, will do everything that can be done with the 16, and do it better. The 12-bore can be made in 16-bore weights and still be amply strong and well balanced. Its ammunition is obtainable anywhere. The shells themselves weigh but little more than

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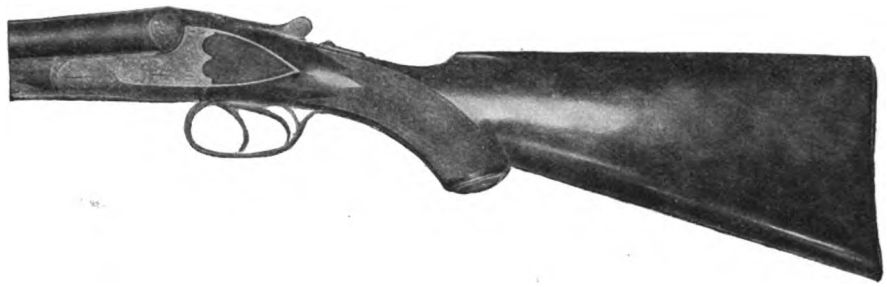
those for the 16, unless said 16 cases are loaded with what are really 20-bore charges.

The 20-bore is the first step into the small bore class. It is a step that means actual reduction in gun weight, reduction in weight of shells and size thereof, and actual refining down of the entire gun. The 16 is but little removed from the 12-bore, particularly when used with 16-bore charges and the change is not worth while. If the shooting actually is too hard for the 20, then the 12 is the gun withal it is amply sufficient to bag the limit of any of our upland birds where a 12-bore could turn the trick.

It does require straighter pointing than the 12-bore, open shooting gun, and its small quantity of shot does not permit of its being used much below the full choke degree. It does require a bit quicker handling than the 12-bore, because its small shot load will not give sufficient thickness of pattern to insure hitting at ranges where the 12 still has plenty of pellets. This in turn requires a bit



A WELL-PROPORTIONED 20 BORE STOCK, GRIP A TRIFLE LARGE IN DIAMETER FOR DAINTINESS

indicated. One maker of repeating shotguns makes a 16-bore but makes it 12-gauge dimensions. The 20 of the same maker is not to be mentioned in the same breath with the over-size 16.

In double guns this is also true—that most of the makers used light 12-bore frames for their 16's, but made an actual change when they turned out their 20-bores.

The true 16-bore charge is an ounce of shot and from 2⅞ to 3 drams of powder. This can be had most anywhere for the 12-bore gun. If the 16-bore is used with ⅞ oz. of shot, then it is in the 20-bore class so far as ballistic efficiency is concerned, but lacks the small size and light weight and small cartridge of the 20.

There is nothing inherently wonderful about the 20-bore. It shoots fewer pellets of shot, and its increase in velocity is paid for by higher breech pressures that would, if used in the 12-bore, give a still greater velocity increase. The secret of the popularity of the little gun is merely that it is light, its ammunition is light and small in bulk, its recoil is small, and straighter pointing than does the 12, merely because the spread of shot is less at the close ranges at which it must be used, and there is less of the charitable mantle of "pattern" to compensate for pointing errors.

To offset this, it is far easier to shoot quickly than is the 12 of normal weight, and thus the necessity for quick shooting, and the ability to do so, meet as happily as did the old lady's two teeth. Regardless of the strength of the man shooting it, the little 20-bore is far more grateful to a tired shoulder at the end of a day's hard walking, than is the 12-bore, and the difference in the weight and bulk of seventy-five 20-bore shells, and seventy-five 12-bore is apparent long before the day is done.

The little gun, strangely enough, has been pointed out by thoughtless writers as suitable for little birds. The opposite is often true.

Loaded with ⅞ oz. of 4's and a stiff load of powder, say 2⅝ or 2¾ drams, the 20 is a remarkably efficient gun on geese unless the ranges are extreme. The big body of the mark renders possible the

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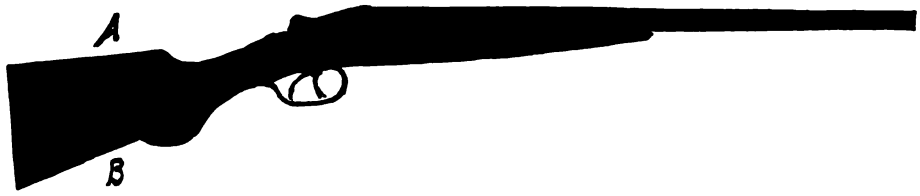

A STOCK TOO HEAVY BEHIND THE GRIP FROM A TO B, DESTROYING THE DAINTY LINES THAT A SMALL BORE SHOULD HAVE

use of the big shot without danger of missing through sparseness of pattern. On the other hand, teal, hard to hit through smallness of size, and hard to kill with small shot, offer the hardest problem for the 20-bore man. If the little ducks are shot at ordinary duck ranges, then No. 7 shot is the outside limit, and No. 6 is still better. Then comes the problem of making a pattern, say at forty-five yards with 6's, that will guarantee hitting the small body of the teal with enough pellets to kill.

Here again comes the ballistic fact that huge loads of large shot can be used without greatly running up the pressures, but the same load of small shot is almost unusable, through excessive breech pressure. A ⅞ oz. load of 9's and a ⅞ oz. load of 4's are not at all the same proposition although backed up by the same powder load.

The ordinary user of the 20 accepts without question the dictum that his gun is of no use at the traps. From the standpoint of the trapman who wants to break them all, this is true; he would be foolish to accept voluntarily a handicap of ⅜ oz. of shot. But when played for the sport of the thing, either against other 20-bores, or without regard to what the 12's are doing, then the 20-bore becomes a gun eminently fit for trap use.

With the trap-load of ⅞ oz. of 7½ shot, and 2¼ drams of powder, the little gun will break consistently ninety per cent. of the birds when pointed right. The record in a straight competition is 95 ex 100, and scores of 90 or better are common. Also ninety per cent. of the possible score, whether in rifle shooting at 1000 yards or trapshooting at clays, is large enough. More becomes monotony and a question of endurance. Gradually the trap clan is discovering this.

There is greater variance in opinion as to the correct proportions of the 20-bore gun than there ever was regarding the 12. One school argues in favor of the 12-bore, bored to take 20-bore shells. They don't put it that way, but that is what it amounts to. The other school makes the plunge to the small bore, lightweight gun like a man diving into a pool, not gingerly, one foot at a time, but in one grand splash. Its members choose featherweight, short 20-bores, as different as possible from the old 12-bore gun.

I must emphatically disagree with the advice to have the 20-bore as nearly as possible like the 12-bore from which one has graduated. Save for the lighter ammunition, the owner has gained nothing, nor is there any logic in such advice. So far as marksmanship is concerned, if the stock has about the same drop, the 12-bore man can change from the 7½-pound 12-bore to the 6-pound 20-bore, and

A CLOSER LOOK AT THE 20 BORE STOCK FOR A LADY, NOTE THE SMALL GRIP

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A 20 BORE NOT WELL SHAPED, NOTE HEAVY, OUT OF PROPORTION STOCK AT THE GRIP

lose in ability to hit only in such degree as the smaller pattern may entail. This in turn is slight, unless he has been accustomed to a splatter-shooting, half choked 12.

The true 20-bore does not run over six pounds. In England their 12-bore game guns exceed but slightly this weight, so the argument as to recoil is worth nothing.

Barrel length is chiefly a matter of taste, so far as actual field efficiency is concerned. At the clays this is a horse of another color. I have seen fine shooting done with twenty-four-inch barrels, and as fine done with those of thirty-two-inch length. I own one 20 with the thirty-two-inch tubes, and shot for a year another with twenty-six-inch. The twenty-four-inch barrels, except for a lady or very small man with short stock, look badly out of proportion. The gun is sort of a carbine, and the racy 20-bore look is absent.

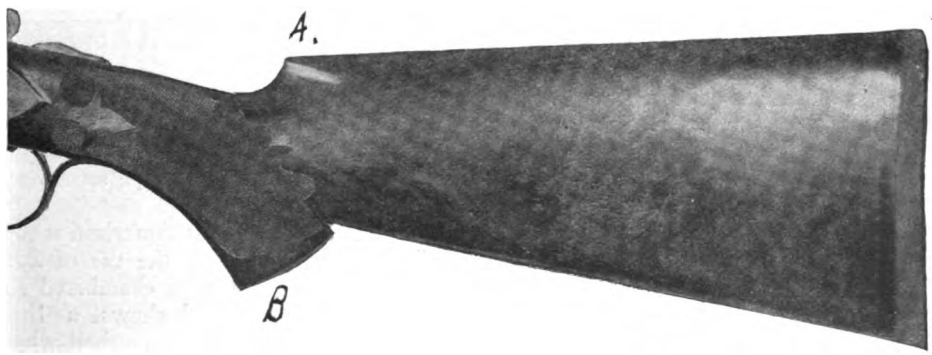
The twenty-six-inch are not to my liking, but for cover shooting they are probably long enough. The tube length greatly depends upon the stock length. The fourteen-inch stock is entitled to a pair of twenty-eight-inch barrels to preserve the proportion, and a 14½-inch stock to tubes thirty inches long.

The thirty-two-inch barrels are extremes, and I would not again select them, although I shoot a 14½-inch stock. Even with fifteen-inch stock, the gun has a long, lean, and hungry look with its small frame and its small tubes, nor is there any occasion for such elongation when the 20 is used for 20-bore work. Also there is the danger that the maker will fall down on the job. Tubes thirty-two inches long are not at all easy to proportion to the normal stock to give perfect balance and fast handling. Particularly is this true when the stock is reduced to 20-gauge proportions, and the frame is a 20-gauge frame.

For the normal being with height from 5 ft. 8 in. to 6 ft. I should choose either twenty-eight or thirty-inch barrels. Freakishness in the small bore should be avoided; it is essentially a pretty gun, a graceful gun, and should be kept carefully in proportion.

Smaller Stock for the Smaller Gun

Many of the little guns fall down in stock proportions. While one's hand



A CLOSER VIEW OF HOW TO MAKE A 20 BORE STOCK, NOTE SLAB-SIDED HEAVY APPEARANCE FROM A TO B

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does not shrink with the shrinkage of his ideas as to gun bores, yet the grip may be from ¼ to ½ inch smaller in circumference without interfering with the easy handling of the gun. The lighter weight and different balance are probably responsible for this.

A stock along 12-gauge lines should not be tolerated, it destroys the grace and handsome lines of the pretty little gun. I have in mind one little 20-bore, made for a lady, and therefore a bit smaller than usual in the grip. The stock has these measurements:

Grip circumference, 4 inches; top of comb down to bottom of the grip cap, 2⅞ inches; circumference of stock just in rear of pistol grip, 6¼ inches, length of stock from front trigger to butt plate, 14¼ inches; drop at heel 2¼ inches, at comb 1½, castoff at toe ⅜ inch, at heel ¼ inch; butt plate, from heel to toe, 5¼ inches; width, 1⅜ inches. It balances 2½ inches from the standing breech, barrels 28 inches long, weight 5¾ lbs.

Keep the Weight Down

Assuredly there is no benefit in merely reducing the hole through the barrels in changing to the 20-bore. The 20-bore gun to weigh from 5½ to 6 pounds is more of a 20-bore gun than the affair overlapping the 16 or even the 12-gauge. Among the duck shooters of Southern California there is a tendency toward long, thirty-two-inch barrels, and weights around 6½ pounds. Some of this is due to the fact that the gun first taken up, before the other companies got into the 20-bore game, was quite heavy, and ran around the 6½-pound mark for the 20.

The upland shooter, or the man who uses his gun for all sorts of shooting, will never regret closing his ears to the song of the heavy, small-bore gun siren, and getting his new small-bore not to exceed six pounds.

It may be noted, in passing, that the English standard is 5½ pounds and their loads far heavier. They gravely speak of a gun scaling just below six pounds for ultra-heavy 20-bore loads running as high as 1⅛ oz. of shot. Overloading the 20-bore is a mistake. If big shot loads are necessary, then the 12-bore is the gun to shoot them. The sole difference is that they add greatly to the pressures and recoil when shot in the 20. All of the extra velocity that is gained in the 20 is paid for by very high pressures. It is a ballistic fact worth remembering that a slight increase of shot load makes a great increase in the pressure, but that considerable increase may be had in powder load without greatly running up the breech pressures.

A load of ⅞ oz. may be taken as the outside for the 20-gauge. Behind the ⅞ oz. of shot the powder load may be increased to 2¾ drams of such powder as Deadshot, Schultze, Empire, and other powders of this class, provided patterns hold constant. Normally the powder load for this shot charge is 2¼ to 2½ drams, and more cannot be obtained in factory loading save on special order.

The three-inch, "Roman Candle" variety of 20-bore case is an entire mistake unless it is used merely to accommodate extra wadding. At this, enough wadding can be put in the 2¾-inch case. Some cranks have made it a practice to stuff an ounce of shot and 2¾ or three drams of powder in these three-inch casings in the 20—with the net gain a great increase in breech pressures and occasional faulty patterns.

The small gun is much more pleasant to shoot when it is well wadded. This in turn makes the use of a 2¾-inch case preferable to the usual 2½-inch. Shotgun casings—in case you want to measure one and don't know how it is done—are measured from the head of the shell, the rim, to the end of the case when it is uncrimped or fired. A case 2½ inches long does not mean one 2½ inches when it is loaded and crimped. It is then about 2¼ inches.

The objection to a gun chambered for 2¾-inch casings is that 2½-inch casings, the sort found in the small store, do not shoot so well in it. The patterns open up five or ten per cent.

However, the largest American maker of double guns advises the use of 2¾-inch casings in his guns chambered for but 2½ shells. Trial shows a little pinching of the mouth of the shell where the crimp opens out, particularly with hard, firm paper, such as a certain ebon-

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hued sort. However, this maker says it is good medicine, and he, if anyone, knows the strength of his gun and what it likes to eat. Such a happy interchangeability makes the problem an easy one. Use 2¾-inch casings with plenty of wadding wherever obtainable, and the 2½ inch when the other sort fail.

Small shot seem to give more deadly results in the 20 than in the 12. Perhaps this is another bit of imagination akin to the more deadly effect of the small gun which gunners seem to notice. Be this as it may, No. 9 shot will kill quail quite effectively, while in the 12 it has proved a great wounder, at least in my hands. The difference is perhaps in the quicker handling of the small gun, and the closer range at which Sir Plumedtop is hit.

In view of the thinner patterns of the small gun, it is well to use the smallest shot that will kill, in order to keep the pattern dense enough. It will be remembered that between the 20 and the 12 there is little to choose in the *percentage* they shoot in the standard thirty-inch circle at forty yards. Small guns do not shoot smaller circles; in fact it is harder to get them to shoot big percentages into the standard thirty-inch circle than it is to get the 12-bore.

The 28-bore is at present outside the pale of practical shotgun politics, although a lot of cranks are getting much joy from them. Factory ammunition is at present poor and adapted to few of our game birds at game bird ranges. Hand-loaded, the 28 can be made to lap over into the 20-bore possibilities, but not one man in fifty is prepared to hand-load shotgun shells, or knows enough to do the work well.

As the 20 can be brought down to far lighter weights than we desire to carry, and this without getting disagreeable recoil, there seems no reason for going into the wilderness of 28-bore-dom and vexing one's soul trying to get good loads or in fact any sort at all. Pioneering is well, but there should be some definite advantage in suffering the hardships thereof.

But two American makers of double guns turn out 28-bores, and one of these makes his 28's as heavy as his 20's, using therefor the 20-bore frame and swamping down the barrels from the large breech. The sole advantage in this gun is the smaller hole through the tubes—no reduction in weight, small reduction in ammunition if the gun is to be used really for killing game. A shot load of ¾ oz. is hard enough to land upon the body of a game bird in earnest about leaving you, and the factory load of ⅝ oz. is to be regarded as utterly special purpose. The standard ⅞ oz. 20-bore load is none too large at times.

The shotgun purchaser, unless he has given the 20-bore a thorough workout and knows that his game can be killed with a still smaller gun, does well not to select the 28-bore with its 20-bore weight and its unsatisfactory loads.

The large number of 20-bores sold, the fact that two of our great factories are making repeaters for it, and the growing demand in the South and Southwest for these guns, are all conspiring to make the 20-gauge shell a very well standardized and efficient shell, obtainable almost anywhere. This is not at all true of the next remove smaller, and the man pioneering should be jolly well certain of just why he is doing so.

In the February OUTING there will be an article on Polo in California that will be illuminating to those who do not know the strength of the game on the coast.

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TICKLING A SHARK

By W. F. MANNIX

The Way They Do It at Tahiti Is Not Likely To Become a Widely Popular Sport

YOU will not believe it. Nobody ever does; but let me hasten to assure you that there is no romance connected with the tale, and strictly virtuous people, with an inclination to be wholly truthful, can verify my statements when next they visit Tahiti. The tall, light-brown native whom you will meet in the shade of a mango tree will tickle twenty sharks for you at the small cost of a dollar Chile (about 1s. 8d.) per head or tail. Terms are strictly in advance, for in shark-tickling there is a risk.

"I have three wives, O friend, and a family of fourteen children. The thought of accident makes me quiver like a palm in the breeze. Two dollars—*sacre!* you're honorable most noble excellency." Fancy! "Excellency" for three and fourpence, to say nothing of a shark hunt thrown in.

The Island of Tahiti is considered one of the most beautiful spots on earth. Papeete, the principal town, peeps out in white patches between the waving cocoanut fronds and green groves of bananas. It is a "comic opera" town, boasting of a jail, a public washing-pool, an obsolete gunboat, and a "nature man." As a rule, inhabitants live chiefly by their wits, while a few honest French folks strive to apply a system of law and order and quell the periodical riots of "beach-combers," "chows," and natives. There are some royal fights, and the scum of the earth climb cocoanut trees—but that's another story.

The shark suffers from chronic hunger. Be he never so gorged, there is a little something away down in a corner of his gray body that urges him on to partake of more food, and eat, and eat, and eat. He scours around the ocean, and be it a jam-tin, a newspaper, or a feeding-bottle, each is swallowed with a relish equal to that of his natural food—any old denizen of the deep. It's his life-worry, this eating habit, and nothing comes amiss to the promptings of his appetite.

Now the shark of the Eastern Pacific exists amid an abundance of food. He is a well-fed fellow, and finds a little spare time to enjoy a nap during the heat of the day, when the sun is brassy in the sky and the waters of the lagoon are warm and limpid. Far down in the coral reef are many cool groves and sandy-bottomed patches, which serve as ideal spots for a mid-day siesta. Monsieur le Shark, like a great gray shadow, swims slowly down to one of these grottoes, gets his head and part of his lithe body well inside, and goes to sleep, mayhap to dream of a sea of young squid, most dainty of his food supplies.

Far above on the blue surface, a native canoe skims along, its great "leg o' mutton" sail drawing to the light breeze. Close up to the reef it sails, and continues a course parallel to the breaking surf on the outer edge, sixty feet away. To the stranger in the canoe, this solid green wall of water, with its intermittent thunderous crashes, makes him think of home—and his overdue insurance premium; he would argue that the wash of the wave must overwhelm the frail boat.

The native in the bow inspires confidence, for he is the most unconcerned person imaginable. He's out for business and the attendant dollars, and the only object that he has eyes for is the shark's tail, sticking out of the reef. Presently he sights one, signals to the steersman, and the canoe is "luffed." The

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"outrigger" takes the water, the great sail is lashed to the mast, and the catamaran lies like a pair of logs on the calm blue surface. Peering into the clear water where one sees with ease to a depth of four or five fathoms, far down below amid the sea ferns and coral cups, is the long lithe tail of a shark, and a huge pectoral fin, that sways continually, with a sideways motion, and sends up tiny circling ripples to the surface.

The native diver picks up a coil of cocoanut fiber rope, with a noose of the "slip-knot" already tied, places a knife in his teeth, and quietly slips into the water. There is no diving, no splash, for the least disturbance would alarm the shark and the tickling performance be postponed indefinitely. It is a wonderful feat in the art of aquatics this that we are watching. The native keeps close into the reef and pulls himself gently down through the water by means of the sea growths, until he is right over the waving tail.

Up in the canoe the white man holds his breath. What if the shark wakes! Ugh! Slowly a black hand and arm are stretched out and, starting from behind the great pectoral fin, commences to stroke the sea-tiger. There is just the faintest movement of the body, and the tail sways a little more rapidly. Again he is stroked, and during the operation the slip-knot of the rope is left hanging loosely near the spread of the tail. Then quietly the native comes to the surface, and one breathes freely again. The great sail is set. The steersmen takes his place on the "outrigger," and the diver in the bow, with a yell of "hula," pulls hard on the rope.

The shark has been tickled and caught; it is only a matter of towing him to the beach and telling the tale to your pals in the "club" at home, and adding a rider that shark-tickling in the Pacific is a pretty tame business after all. So thought I, and the match was half way to my cigarette, when straight out in front of the bow a great gray-blue thing "broke water." It was the shark very much awake; he splashed about in a mad frenzy for a moment or two, then sank and settled down to a tour of the lagoon.

Twice he circled at about eight knots an hour, and the canoe plowed along in grand style, with the water bubbling and frothing at the blunt bow, where the alert-eyed native watched intently the tautened rope. Then, quite suddenly, it slackened, and our diver, like a flash, went over the side with a knife in his hand. Two minutes later the surface was brilliant red, and the native was scrambling into the canoe again. We towed the shark to the beach and measured him. Sixteen feet of man-eater is "good sport" for one afternoon.

You may talk as you like about whipping a stream with a fly, and, if you are lucky, get two rises before sunset; it may be exciting to catch dolphins from the jib-boom of a ship, or fish for the fighting tarpon in the Gulf of Mexico, but for real enthusiastic "thrills" let me recommend "tickling" a shark at Tahiti or thereabouts.

HOW TO PREPARE DESSICATED BEANS FOR CAMP USE

As a single article of diet one cannot get more nourishment in a given quantity than from beans. The old and well established objections to boiling them in high altitudes or carrying the heavy canned variety are easily removed by employing a simple process brought to attention by a forest ranger who was experimenting with emergency rations. Navy beans are cooked in the ordinary way at home or one takes the canned kind dried in long bread pans in the oven, then mashed and ground to granules and stored in waterproof bags or pry-up tins. By excluding moisture the product will keep indefinitely. For use the bean granules are mixed with water and heated to a gruel.

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HOW EUROPE IS LEARNING TO PLAY THE GAME

By MACK WHELAN

ILLUSTRATED WITH PHOTOGRAPHS

AMERICA won in the track and field events at Stockholm in 1912 with almost monotonous regularity. Such competition as there was was individual and spasmodic. Almost alone of all the other nations Finland showed the results of organization and team work. The lesson has gone home and Europe is in training for Berlin. What is the nature of the material at hand? And what is the present state of Continental knowledge of field and track athletics? These are the questions that Mr. Whelan answers from the standpoint of personal observation and study.

FOR a good many hundreds of years, when English, Irish and Scotch gathered together there was one conversational topic which could be depended upon to preserve the fraternal atmosphere. All three races agreed that supremacy in the field of practical physical education lay between them. To progress further in the process of elimination was not considered tactful. It was entirely within the bounds of good form for an Englishman to observe that his particular hero could dispose of any three Dutchmen. No untoward happening resulted if an Irishman remarked that, with one hand tied behind him, he could handle any four Frenchmen who ever lived. That any one of the three British branches could produce a better man for any test of strength and skill than any foreign race was a belief deeply rooted. When it came to a further narrowing down of the subject, comparisons were dangerous. As between the Irish, Scotch, and English, superiority could not be claimed if those present desired to go home with whole heads.

Later in the chapters of history and exploration, after new continents were allotted a place upon the map, the field naturally broadened to admit the Yankee, the Australian, the Canadian, and other offshoots of empire into the brotherhood; but for centuries the union of English-speaking nations has been living in the faith that through especial hereditary selection and long environment, a particular combination of bone, muscle, and indomitable spirit, the specific combination being determined at birth, fitted them to outstrip foreign competition upon the athletic field. Whatever difference of opinion existed as to the merits of any one strain, they all concurred in the belief that the leadership of the world in contests of practical strength-efficiency lay between them.

Practical, mind ye! None of your Greek esthetics, German gymnastics, or French pirouetting! The Britisher or American would readily admit that ancient Greece developed some splendid-looking professional strong men, and that Europe produces many specimens of symmetrical physique. The fact that the foreigner looked twice as strong added rather than detracted from the fun of comparison when it came to rough and ready encounter and that species of physical ability which, in English and American minds, expresses itself in the ability to play football, pull an oar in a shell, or make a generally creditable

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showing in track and field athletics. That the Continental is constitutionally unfitted for this manner of sport, and that he is lacking in the spirit to compete successfully, was a statement which was almost never disputed a decade ago. And it is still generally prevalent.

There is nothing more annoying personally than to have individuals whom you have come to regard as hopelessly deficient in a given field of endeavor suddenly develop into formidable competitors. As regards the international athletic situation, the uneasiness is particularly acute, because it is being generally realized that the prestige of English-speaking peoples in sport has been built up largely because, until recently, there has been no outside competition. Instead of being better than German, French, and Swedish rivals, it is now admitted that the latter nations have yet to demonstrate their ability to best the originators of certain pastimes.

It is simply a case of a limited number of people playing a game by themselves, and assuming that all who didn't play were lacking in all the attributes for competing. The younger generation of the Continent—and the inhabitants of other portions of the world for that matter—are just learning the rules. And already they have demonstrated a degree of efficiency sufficient to cause some observers to speculate upon the probability of their ultimately setting the pace for the original rules committee. At all events, it is fairly certain that the widespread and ingrained feeling of physical superiority which has animated the English-speaking races is scheduled to receive some rude shocks within the next few years.

How often in the various classes of fiction—from the tu'penny thriller of Fleet Street, wherein the British Tommie masters thirty Italians in single-handed conflict, to the pretentious American magazine serial telling how Mr. American engineer successfully disposes of a mixed assortment of French, Germans, Spaniards. and Russians at Panama, you find the note of physical superiority repeated. All patriotic authors find no questions asked if one American or Englishman disposes of a small regiment of "foreigners." A hero who wasn't good enough to give an account of himself, in the proportion of six to one, would not be worth writing about.

There has been a legitimate excuse in the past for discounting foreign competition in the field of practical physical efficiency. Whether the Anglo-Saxon will be equally formidable in the future is another question. Heredity does not express itself more forcibly in terms of nations than in the kind of life they lead out of doors. For centuries Great Britain has had a monopoly of that kind of sport which means physical contact. There was no doubt of the ability of the nation to excel. And the effect of this mental attitude has not been confined to track and field. I think it was the Duke of Wellington who said:

"Waterloo was won on the playing fields of Eton."

Perhaps it was not the greatest of English generals who summed up the campaign in this way. You can make sure by buying a copy of the London *Times,* turning to the columns reserved for communications to the editor, and running your eye down until it catches the paragraphs wherein Veritas laments the decadence of modern British athletics. A bothersome sense of accuracy tells me that the Duke, in his original epigram, attributed the victory specifically to the cricket facilities of the famous school. What he meant, however, was that the aggressiveness, sound lungs, and strong legs developed there turned the tide in favor of the English forces. And to the American mind, cricket experience would indicate the development of inexhaustible patience, which was not the quality the nobleman in this instance intended to glorify.

Europe Not Naturally Athletic

The important fact is that in 1815 the schools of France did not have the kind of playing fields with which Eton was surrounded. The allied armies of Austria, Prussia, Russia, and England numbered a very limited number of soldiers who had served a preliminary campaign in the warfare of school-boy athletics. Now there is not a nation in

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Europe which is not duplicating the athletic system to which the Iron Duke attributed the success of English arms against Napoleon. The German Empire has initiated a campaign of education in the hope of winning in world-wide athletic competition in the next Olympic Games, which are to be staged in Berlin. Europe is learning to play the games which she once regarded as the strange freaks of English fancy, and the degree of progress already attained is surprising.

In the general revision of the athletic map, made necessary by the worldwide interest in sport, there are many amusing developments, but nothing more so than the British attitude toward the change. The English public was distinctly perturbed when American athletes on succeeding occasions demonstrated their superiority over the best which the old country could put in the field against them. Now that France, Germany, and Sweden, nations which for years have been regarded as outside the athletic pale, are developing men who are able to defeat crack English performers, the London papers are swamped with communications from readers asking for expert opinion as to the remedy or suggesting ways and means of regaining British prestige.

No unprejudiced observer who witnessed the great spectacle at Stockholm two years ago, which enlisted the services of the picked men from all civilized nations, failed to admit that the modern revival of the Olympic Games has done more to spread interest in healthy physical competition among the nations than Baron Pierre de Coubertin and other sanguine enthusiasts who were instrumental in renewing the ideal of worldwide rivalry could have hoped or expected. And the degree of skill shown by men wearing upon their shirts the insignia of nations which ten years ago were not upon the map of athletic competition was such as to engender a feeling that before another decade has passed both the United States and the British Empire will have to revise the traditional estimate of foreign ability.

Followers of athletics in this country have had an opportunity for proving the faultiness of ancient prejudice, through the remarkable records in practically all branches of athletics made by the second generation of immigrants who came to America from lands where the spiked shoes never had scratched the soil. There is scarcely one of the many strains of blood that have come into the United States which is not represented on the record-books of the Amateur Athletic Union. Of course such men had the advantage of atmosphere, but it has been proved that this can be cultivated in other lands than where English is spoken.

It would, of course, be a mistake to assume that the interest of outside nations in things physical is new. It is their attitude which is changing. Continental nations—Germans and Italians particularly—have for many years been paying great attention to gymnastics. They have looked upon the problem of physical development under modern living conditions seriously, and have been leaders in the disciplinary developing exercises, scientifically designed to build up the body. It is the faculty of playing games for the fun inherent in them and of attaining the end of adequate bodily development as an incident to the joy of competition, which is the new note.

A New Spectacle

The sight of thousands of splendid-looking young men, sent from all over the world to represent their nations in tests of strength, skill, and endurance, as they marched into the Stadium on the opening day of the last Olympic Games, sent a thrill through the crowded stands, the nature of which is hard for an American to comprehend. Here were the chosen sons of peoples which for centuries have been accustomed to appraise each other, not in terms of fifths of a second in the hundred-meter dash, but in computations of linked armor, blunderbuss, or modern machine-gun. Here, at last, was a common meeting ground discovered which gave to Europe an opportunity of measuring efficiency in a way which did not leave both victor and vanquished mourning when the meeting was concluded. And the degree of excellence which was revealed by

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nationalities whose athletic history is not a decade old made it plain that the German and the Frenchman and the Belgian, properly coached, can give the American or the Englishman or the Irishman stiff opposition in any event on the program.

In many respects the showing made by Finland was the surprise and sensation of the Stockholm Olympics. The proficiency of the Finns demonstrated once and for all time the fact that it is not necessary for a nation to serve a long apprenticeship in athletics before making a place for themselves among the leaders in international sport. The showing of such men as Kolehmainen and Stenroos in the runs; Saaristo, Taipale, Peltonen, and Niklander in the weights, seemed almost inexplicable to critics who knew of the smallness of the country and of the fact that Finnish finances did not permit of the intensive and expensive foreign coaching such as was possible elsewhere. The credit of having made a place for themselves upon the international athletic field with little or no instruction from outsiders must be given to the Finns.

It was not merely enthusiasm for sport which gave the Finnish competitors their inspiration. The current athletic movement there is really a national effort to impress the world with the fact that the nation exists in spite of the fact that for many years it has been a Russian province. The strength of this national spirit among the Finns was indicated in Stockholm during the games when the Grand Duke Boris of Russia was embarrassed by having the Finnish competitors take up the battle-song of their country shortly after he entered the Stadium. This number was not on the program, but it met with such an enthusiastic reception from the Scandinavian nations, who realized its significance, that the Grand Duke gathered his cloak about him and, turning his back upon the royal box, left the arena.

Distinct as was the impression registered upon spectators at the great meet in Stockholm, no one who has not visited Finland can understand the sacrifices which the representatives of this nation made to become proficient in the events which were on the Olympic program. Perhaps there are other countries where the struggle to maintain life is more bitter than in Finland, but they have never come under the notice of the writer. One does not find in the ancient city of Helsingfors the beggars which are so numerous in the south of Europe. It almost seems as though the fight for the means of life is too keen to give a parasitic class a chance for existence. There is not a large proportion of the people who have more of this world's goods than they need for themselves, in Finland.

A student at the University of Helsingfors—one of the oldest educational institutions in Europe by the way—gave the writer the key to the Finnish ardor for athletics. Helsingfors has educated some noted scholars and scientists, and the number of students there is large. For most of them, the money required to pay for their university course represents a sacrifice at home. The atmosphere of hard work which pervades the place is keen enough to delight the most radical critic of American university life. Yet the enthusiasm for athletics is fully as pronounced as in the United States.

Athletics a Finnish National Movement

"The reason for the devotion to athletics? It is simple enough," said one of the most prominent undergraduates. "The life of the Finn is regulated by Russia, even to small details. Every influence possible is used to stamp out the memory of Finland as an independent nation. The Russian language is forced upon us whenever possible. Until a short time ago, it seemed as if no influence could be brought to bear to make the world remember that Finland still existed. Then came your athletics and the Olympic Games. Some of us saw our chance to again give Finland a place —even though a small one—among other nations. The interest in athletics in this country is largely built upon a patriotic foundation."

That the Finns do constitute a separate and distinct race is apparent to any critic who lives among them even for a

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short time. And that there are few nations which possess such profusion of capable athletic material in proportion to population is a fact which is equally plain. They are a hard, wiry people with unlimited capacity for endurance. They average high in the type of young men who would delight the heart of a good American such as Mr. Jack Moakley, of Cornell. If Moakley should leave Ithaca and enlist in the service of the Finns, the number of points which would be scored by Finland in the next games might astonish all competitors; but to raise the funds necessary to give the yearly remuneration which the crack coach receives at an American university would badly cripple the finances of the University of Helsingfors.

Yet the student athletes there manage to keep up with the latest thought on athletic subjects. Most of them are remarkable linguists. In addition to the native tongue, they speak Russian—although they often will not acknowledge it officially—French, German, and English. Knowledge of English is surprisingly common among the educated classes, and the selection of literature is not confined to Shakespeare, Browning, and the learned periodicals.

In a party which visited Finland some time after the last Olympic Games were a number of athletes, including among others J. R. Case, the hurdler, who has made a remarkable record competing for the University of Illinois. Certain Finnish athletic enthusiasts had issued an invitation to the Americans to accept their hospitality while in the city of Helsingfors, and when the steamer pulled up at the wharf, a committee was waiting to receive the visitors. Strangers in a strange land, the American party headed for carriages, when a clean-cut looking young man walked up to the tall hurdler, put out his hand, and said:

"Mr. Case, I am glad to see you."

After shaking hands, the American started to introduce the rest of the party, but found that the Finn recognized some of them before he pronounced their names. Later it was learned that the chairman of the committee had never seen Case in his life before, but had recognized him from a picture in an athletic handbook published in the United States. This explanation greatly interested the writer, who discovered that the Finnish students subscribed to practically all the magazines and many of the English and American newspapers giving space to athletic news. And for detailed knowledge of time and place of important records, many of the Finns can outclass the average sporting writer specializing in the subject.

The atmosphere of life in Russia is much less adapted to developing athletes than that prevailing in Finland. The magnificence of the life led by the aristocratic classes in the Empire is not naturally conducive to their attaining that degree of physical condition which makes a stiff quarter-mile run popular as an afternoon pastime.

At a time when the writer was in Russia, a delegation of American athletes arrived in St. Petersburg. The newspapers had been devoting much space to the international fight for athletic honors and the visiting performers, who also included a number of the ablest Finns, came as the guests of the Russians to compete in a special meet organized in their honor. The event was staged at a remarkably well-equipped country club situated near the waterfront, outside city limits.

A New Training Diet

Here we will introduce Jim Duncan, discus-thrower, who at this point in the story of his life was to be introduced to a new athletic custom. To my knowledge, Jim has never been in Rome to do as the Romans do, but at one time in his career he was a guard on the L lines in New York City, which as far as driving home the lesson of adaptability is concerned is certainly a valuable experience.

The scene at that St. Petersburg Club before the meet began was such as would have delighted the heart of an author of college athletic stories. There was the flower of Russian society, fair women—they are fair—brave men—not that any man wouldn't look brave in a Russian army uniform—gathered to see the competitors distinguish themselves. The sun

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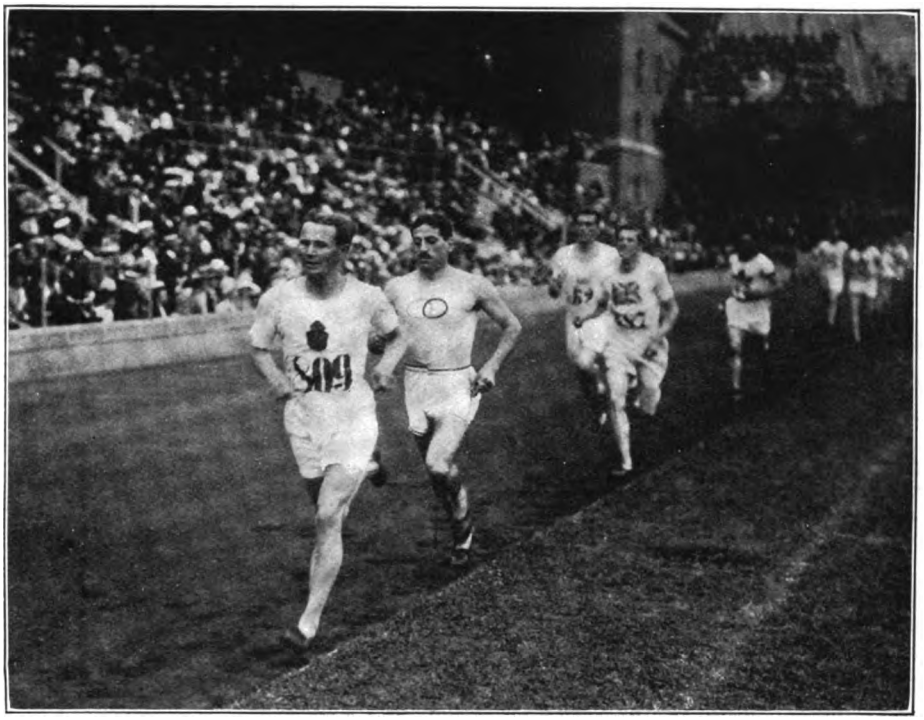

WHEN AMERICANS AND ENGLISH FINISHED IN THE RUCK

Hannes Kolehmainen (Finland) and Jean Bouin (France) fighting to a stirring finish in the 5,000 meters at Stockholm, with George Bonhag, the American champion, outrun.

shone brightly on silks and satins and gold braid and swords. There was a wide expanse of beautiful green turf, with the waters of the bay shimmering in the distance. In fact, all was calm and promising until a majestic gentleman bade all athletes follow him over to a temporary booth which had been erected.

There were no stands on this field, and the spectators sat in a V-shaped alignment around the space which had been marked out for the competition. The athletes, therefore, had some trouble wending their way through the throng, but finally Russians and Finns and Yankees were gathered around the club official. He began by announcing the order of events, the discus being first upon the program. Then he said a few kind words for Finland and America, with the charming grace which a Russian can confer upon an occasion of the kind better than any other nationality. And he ended with words to the effect that the athletic program would begin with the usual ceremonies with which every important happening was initiated into life within the boundaries of the Empire. At this cue, servants bustled themselves distributing small glasses to the athletes, and others followed, who filled them to the brim with an innocent-looking substance which appeared to be water.

"To the health of the Czar!" said the Russian master of ceremonies, and at the words the native athletes and most of the Americans drained their glasses. The Finns knew more about Russia.

Not only was the discus the first event upon the program, but Mr. Jim Duncan, holder of the world's record in the event, was given the place of honor. With great dignity he took his place in the circle marked out for him. With minute care he described a number of preliminary circles in the ring. Faster and faster he revolved. Then, very suddenly, with a tremendous heave and all the power he could muster, he sent

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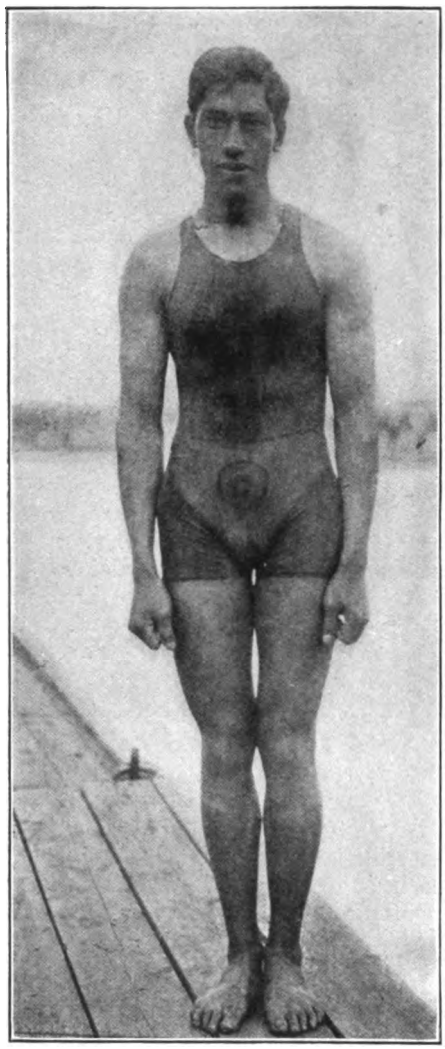


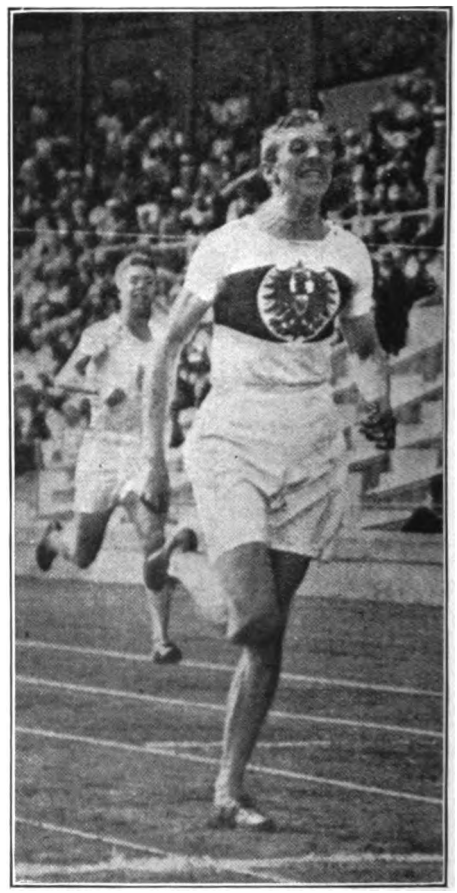
THE THREAT FROM THE SOUTH SEAS

Duke Kahanamoku, who has shown by the stop watch that the swimming prestige of Hawaii is no South Sea fairy tale.

the discus shooting at the heads of the most dazzling center of gold braid in the midst of the assembled spectators.

There was a quick and undignified movement among the generals, colonels, and captains who composed the target. Swords flashed in the sunlight, although they had not been removed from the scabbards. Agility won out. No lives were lost. The discus may have knocked off a hat or two in its passage, but it did no further damage. In fact, Duncan was not informed until some time later that the beverage he had drunk was vodka, guaranteed under the food laws of the Empire to be ninety-nine and nine-tenths per cent. pure—alcohol. Furthermore, most of the other Americans did not appreciate the fact. One well-known all-around performer, hailing from Chicago, essayed the high jump, immediately after the escape of the Czar's forces from the peril of the discus throw. He leaped more than an inch higher than he ever had in his life, but when he reached the ground he landed on his wrist, breaking it in two places. The fractures were so serious that the item of X-ray examinations figured large on his account-book for his European journey.

The Russians have a great deal to



BRAUN, OF GERMANY

A great middle distance runner who, in in spite of bad training methods, has beaten English and American cracks.

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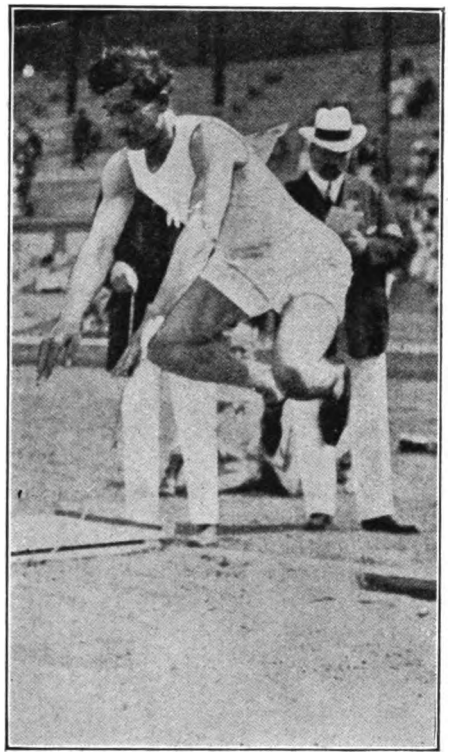

TSICLIRITAS, OF GREECE

A broad jumper whose records keep the home of the original Olympic games on modern record books.

learn about the principles of athletic training, but from the physical standpoint there are few races who have as good natural material available for certain of the events on the track and field program. In the weights especially there are any number of men who, properly coached and taught to observe correct rules of training, should prove formidable competitors. Among the younger men in St. Petersburg there are some promising sprinters. The idea of running a mile or over is not one which appeals to the average Russian mind as coming under the head of pleasure.

His Majesty Nicholas II, according to both Russians and Americans living in St. Petersburg, has within the last few years become keenly interested in the idea of incorporating the athletic system in the schools throughout his realm. The Young Men's Christian Association, which has built up a strong organization in the capital, has been particularly active in arousing enthusiasm for out-of-door sport, and has received considerable financial aid from the imperial treasury. The Y. M. C. A. is under the direction of Americans, but it works in harmony with the Russian Orthodox Church. The religious authorities are giving their support to the plan of having young men compete in athletics because they believe that it will tend to reduce the dissipations which

LIESCHE, OF GERMANY

A high jumper, combining rare form and aggressiveness, who should provide stiff going for all competitors two years hence.

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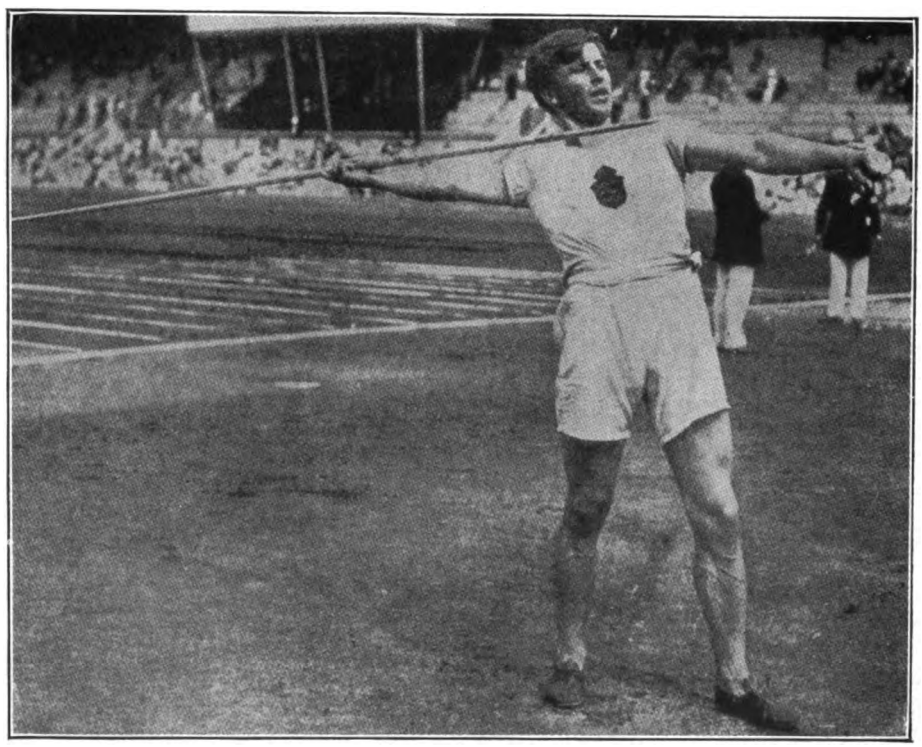
have held a recognized place among undergraduate sports in Russia for years.

Directing the athletic work in the capital there are a number of live young graduates from American colleges, most of whom were members of athletic teams while in college. They believe that within a few years there will be Russians competing in international athletics who will make their presence felt in the point column. A Y. M. C. A. secretary who before applying for his passport had played football and thrown the hammer at a college in the Middle West, told me that the progress registered has been remarkable.

"Athletic interest is doing a great deal to improve the standards of undergraduate life here," he said. "Of course, the general ignorance of the most elemental rules of training seems strange to an Englishman or an American. It is with the youngsters who are now sixteen or seventeen years of age that the prospect for effective work on the athletic field rests. They have been properly handled from the time they first began to go to school. Many have remarkably good physiques, and some of them will be better than fair performers within a few years."

Lack of knowledge of the principles of proper training is not confined to Russia. Germany has, with the usual Teutonic thoroughness, learned a great deal about the proper method of preparation within the past twelve months, but less than two years ago the ignorance was so pronounced as to be amusing. And it is apt to be a considerable number of months before the German athlete learns to reconcile his appetite to the Spartan limits of the training table.

Braun, the remarkable middle-distance runner from the Fatherland, may be said to have discovered his ability on the track in spite of everything he could do to conceal it from himself. During his first trips to England, Braun consumed a midday meal on the day he was facing competition which would have put an ordinary man to sleep. Even at



J. J. SAARISTO, FINLAND

Notable for proficiency in the ancient art of throwing the javelin, a graceful and difficult event in which Americans have not distinguished themselves.

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MAGNUSSON, OF SWEDEN
A capable all around man representing fairly the natural material and athletic proficiency in the north of Europe.

Stockholm, he showed a lack of knowledge of some of the most elemental principles of preparation, which was particularly surprising in view of the high class of his performances.

This ignorance of training dietetics practically applied to the events of the track and field program was particularly surprising because of the leadership which German science holds in that field and because German swimmers, who are notably proficient, have had a reputation with foreign competitors for being extremists on the selection of exactly the right kind of food previous to competition. An American observer of the athletic movement said to the writer that until quite recently promising young athletes in Germany had been overworked in practice to such an extent that their efficiency was permanently lowered. Yet the national interest of Germany has been directed toward athletics and it is in every way probable that the Imperial Eagle, which the fittest of the competitors are now allowed to wear in international games, will be prominently to the fore at the next Olympics.

For the reason that the adoption of the English type of athletics is something of a legislative program in Germany, the interest there is in some ways more widely diffused than in this country. Because young men have been trying to run a hundred yards in less than ten seconds for a good many years in this country, there is a large part of the population which knows that it is not concerned with the feat. The whole structure of competitive athletics is new to Germany, and politicians, scientists, and the public generally are watching the movement. In Berlin, I was asked to answer questions propounded by men of a type you would not be likely to find discussing athletics over a luncheon table in this country.

At Heidelberg, convincing testimony of the rising interest in competitive sport was given by a witness who was certainly unbiased. At the university, I had the pleasure of meeting one of the first co-eds to receive a regulation degree there. She was intimately acquainted with all the traditions of the college. Her father was one of the

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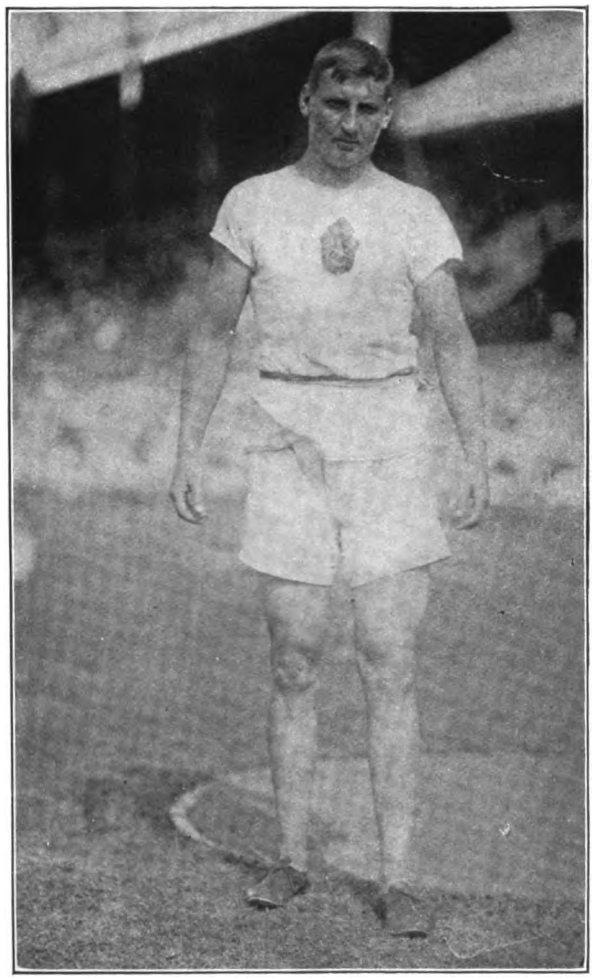
most famous professors—his library now forms an important part of the German collection of the University of Chicago—and his daughter had a particularly complete knowledge of the corps life at Heidelberg. That the duelling and brawling which have given these societies a picturesque reputation throughout two hemispheres would soon be entirely done away with and that the modern athletic system would be the instrument for the complete elimination of these features of Heidelberg life, was her opinion.

"Competition for places has become too keen to let men spend most of their time as undergraduates drinking and wounding each other," she said. "There have been a number of attempts made to interest the students in competitive athletics. The early ones were not successful, but with the next Olympic Games to be held in Germany, I think that Heidelberg will take up the sports. Perhaps the corps will be playing each other at football instead of duelling before long."

Kaiser Wilhelm is keenly ambitious to have his subjects do well. He has made several large advances from his private purse to help build the Berlin stadium, and it is significant of his own attitude that his sons are taking up running and are very fair performers in some of the runs and jumps. When the German Athletic Commission was in this country early last fall, Lieutenant von Ragenau, who was a member, said that the whole country is bent on developing young men capable of giving a good account of themselves in the summer of 1916. The selection of A. C. Kraenzlein from the ranks of American trainers to give to the Germans a thorough understanding of American methods will result in the development of some first-class performers, according to men who know him and the material he will have to work with.



TAIPALE, FINNISH DISCUS CHAMPION
Who breaks records and all the rules of form in his event at the same time.

That France can produce as capable athletes as any other country has been indicated by the remarkable work of Bouin, who has defeated the best men in Europe in the middle distance races, and who gave Hannes Kolehmainen at Stockholm one of the closest races in his career at 5,000 meters. The French government is now promoting outdoor sports and this impetus will undoubtedly develop other men of Bouin's class. Belgium, long noted for turning out good crews, has become one of the keenest

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sporting peoples of Europe. There are many well-equipped clubs.

Hungary sent quite a large delegation to the last Olympic games, and the ambition of the entrants is indicated by the fact that one man attempted a feat which no American tried to duplicate. Baronyi entered both swimming and field events. He finished fourth in one of the swimming events and seventh in the standing broad jump —not a bad record considering the number and caliber of the entrants. Until recently the interest in athletics throughout the Austrian Empire has been limited to the few, but the fact that the Government has awakened to the importance of the subject is attested by the sending of Dr. Herschman as an athletic envoy to the United States and of the appointment at his suggestion of an American trainer to coach the team which the Austrian Olympic Games Committee will send to Berlin. Several men have been discussed and the man chosen will undoubtedly be among the most capable for the work.

JAPANESE ATHLETES BEFORE THE GAMES
Team from the Eastern Empire defiling before the king.

Italy has produced some remarkable runners. The records of such men as Dorando and Lunghi and the ability they have shown to live up to reputations made abroad when they come to this country have indicated how readily the race takes to our kind of athletics. In the past the emphasis has been placed more upon calisthenics and acrobatics than upon football, rowing or track and field work, but it seems fairly certain that if the nation once takes a general liking for the Anglo-Saxon program, creditable representation will be assured.

An indication of the changing attitude toward athletics which is manifesting itself over the Continent was afforded when, some weeks ago, the Pope blessed a large delegation of sturdy young performers, comprising English and Irish as well as Italians. They gathered in Rome to take part in general athletic competition there under the auspices of church societies. A feature of the program was their march to the Vatican to be blessed by Pope Pius X. There was an interruption in the form of an anti-clerical demonstration on the streets of the city, but the athletes reached the Vatican in good order and, kneeling before the ancient balcony in the Court of St. Damaso, received the pontifical benediction.

There are indications that before many years have passed the present leaders in sport will have to fear not only European competition. A recent news dispatch from Tokio announced that in a Marathon run over the regulation distance, and with a hard course to contend with, a Japanese had run considerably under the record. Comparative time, especially in such an event, does not mean much of itself, but it is significant of recent developments in the East. Yale-in-China, the college which New

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EMILIO LUNGHI, ITALY

A noted runner who made good his fame in his own country by beating American talent in the United States.

Haven graduates have built up in the former Kingdom of the Yellow Dragon, has a complete athletic system and reports have it that an Intercollegiate Athletic Association is now in the making. The fact that Hawaii is part of the United States credited the remarkable swimming exploits of one Duke Kahanamoku to America in the last set of Olympic games, and the next competition is apt to show some competitors from the Philippine Islands.

South America is still to be heard from as regards athletics, although at least one country—Chile—was represented at Stockholm. Argentina is, from the climatic standpoint, a good training country and breeds stalwart men. Furthermore, it possesses enough wealthy enthusiasts to send a representation in case capable young men are developed. So far, however, the Argentinans have put more emphasis upon polo and riding generally than upon track and field events. Where good horses are abundant it probably seems superfluous to develop runners. Yet a few years ago, the possibility of attracting numerous European nations which are now enthusiastic over athletics seemed much more remote than does the probability of Argentina coming into the fold in the future.

In general, however, the future growth of athletics around the world may be said to be dependent only upon climatic conditions. Where there is cold or brisk weather during part of the year, there is reason to believe that capable entrants can be developed. Of course, allowance must be made for the particular sporting tendency prevailing.

The special enthusiasm in Denmark is for football. The game played is of the soccer variety and the standard of play compares favorably with that of the best English teams. Norway has become imbued with the athletic spirit only recently, but the splendid physique of the men of this nationality should make them a factor in the near future. Of all the Scandinavian nations, however, Ameri-

A. C. KRAENZLEIN AT HIS BEST

The American coach who is to direct German athletic ambitions, as he looked during his own career of active competition.

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can sympathy is probably strongest with the Swedes. If there is an American who visited Stockholm at the time of the Olympic Games who did not acquire a warm friendship for the hosts on that occasion, he is yet to be discovered. From the time the visitors first arrived in the city until the last of them were gone, it seemed that there was not a citizen of the capital who did not consider his own interests secondary to explaining matters to foreigners. An incident which occurred when the *Finland,* bearing the American team, anchored in the harbor, illustrates the friendly attitude of the nation.

When the boat arrived at the Swedish Capital, the American party found the populace massed along the water front. Alongside the *Imperator* or the *Olympic,* in New York harbor, the *Finland* does not look formidable, but the channel from the Baltic to Stockholm is narrow and tortuous and the arrival of the vessel was distinctly an event. A few hours after the anchors had been dropped, a committee representing the Swedish authorities put off from the quay in a natty looking launch. There were half a dozen smiling gentlemen who ascended the side of the American steamer. Their faces were the picture of smiling hospitality, and the noblemen who headed the procession had in addition a calmness and poise which seemed to indicate that he knew just what to say and how to say it, in order to make the Americans feel completely at home.

Removing a glistening high hat with a flourish and with a sincerity of manner which could not be misjudged, he advanced to that part of the deck where Colonel Robert M. Thompson, Gustavus T. Kirby, president of the American Amateur Athletic Association, Commissioner James E. Sullivan, and other officials were gathered to receive the visitors. A brooding silence for the moment overhung the vessel, against which the opening words of Sweden's welcome seemed to reverberate. Extending his hand toward Colonel Thompson, he remarked in one continual flow of words:

"Hello! How are you? And me? I am good, too! Good-bye."

With smiling courtesy he marched down the row of officials and to each of them gave the same ceremonious greeting, while the American athletes and their friends did their best to give the Swedes the impression that the gale of laughter which shook the ship was entirely due to the joy of the Yankees at having finally reached the goal of their long voyage.

It is hard to describe how humorously the greeting of the hospitable committee man struck the American party. Being unacquainted with the English language, he had evidently gone to great pains to acquire a few sentences which would make his guests feel that they were among friends. And while the humor of the situation first caught the attention of the Americans, the fine spirit underlying the odd English did not fail to makes its impression. Throughout the remainder of the visit in Sweden, whenever one American descried another across a park or a public square, you could hear an echoing shout for blocks away: "Hello! How are you? And me? I am good, too. Good-bye."

BAKING GOOD BREAD WITH THE FRYING PAN

A MOST satisfactory oven for baking camp bread can be improvised out of the fry pan and two pie plates. See to it that one pie plate fits bottom downward into the frying pan and that the other pie plate fits bottom upward on the rim of the first tin. There is now an air space between the bottom of the fry pan and the lower pie plate which is greased to hold the dough and another space between the dough and the upturned bottom of the upper pie plate. The fry pan is placed in a bed of hot coals and the covering pie tin is loaded also with coals, thus supplying the envelope of hot air necessary for baking.

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RAPID TRANSIT IN WINTER WOODS

THE first time you go into the woods on snowshoes you will probably finish the opening day with the feeling that your own body is all the weight you want to carry, and that your own feet are all that you can possibly drag. But that feeling will pass and soon will come a sense of elastic power that may overleap the bounds of your ability. The last stage of your development will be a thorough knowledge of just how much you can take with you and the best way to take it. There are places where a pack will provide both work and supplies enough, but if you wish to, or can, go beyond that the toboggan is the vehicle. See that you do not get too narrow or too heavy a one, nor yet one that is so stiff that it will drag like a bridge timber. Peary learned in the Arctic that a certain amount of play and of elasticity was necessary in his sledges, and the same thing holds true of a toboggan. It is not speed you want, but lightness and durability for the long tramps and the hard usage that will come in thick woods.

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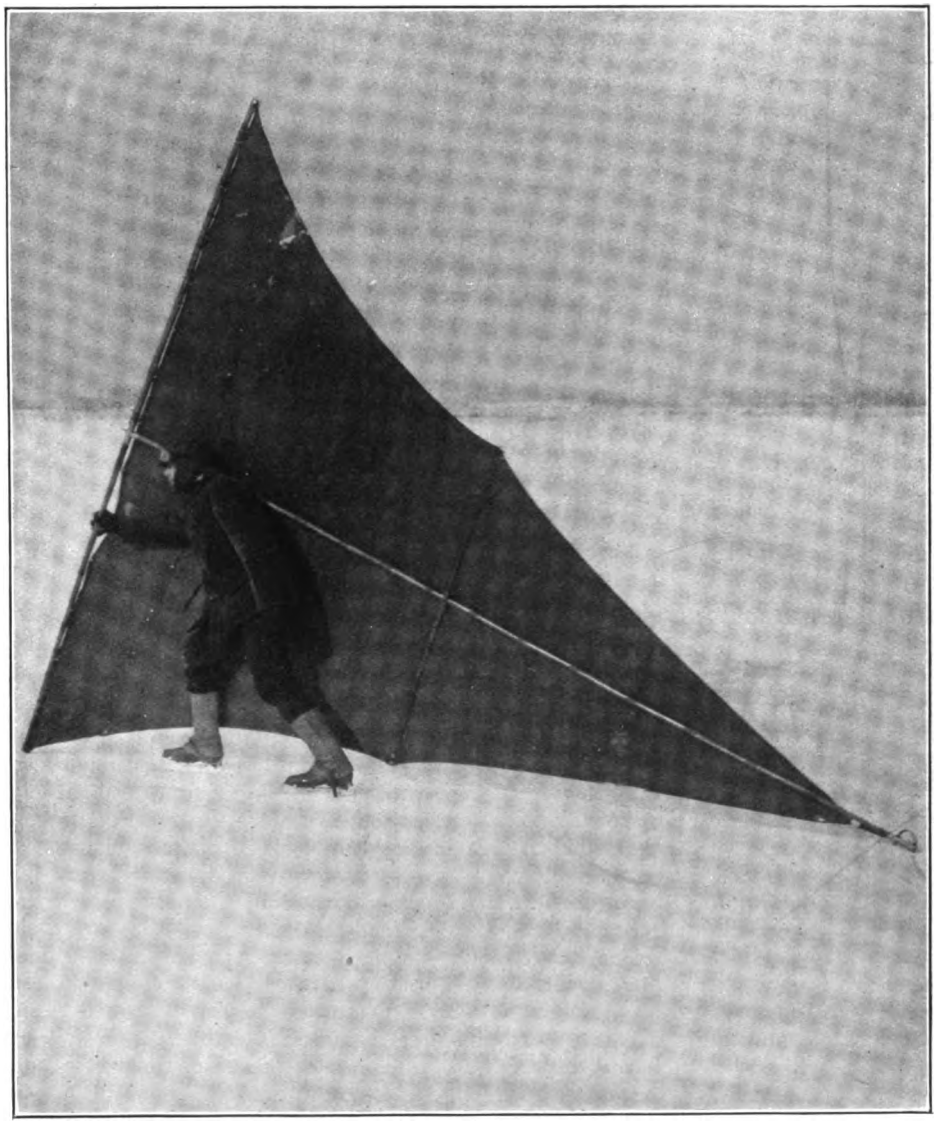
ON THE WINGS OF THE WIND



SKATE sailing seems to have gone a little out of fashion, but it is good sport for all that. The rig that is illustrated herewith is old-fashioned but still good. Its virtue is that it gives ample spread of sail for speed and at the same time keeps always easily within the control of the skater. The right arm holds the sail and the tail of the boom may be allowed to drag on the ice. It is possible to sail fairly close to the wind without hard work and at the same time to come up or off on the instant as occasion may demand.

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THE RAILROAD STATION AND BRIDGE AT BOCA DEL RIO

A NEW TARPON GROUND

By F. W. STERLING

ILLUSTRATED WITH PHOTOGRAPHS

Boca del Rio Puts Tampico and the West Coast of Florida in the Shade

"Medellin River—At the entrance to the river there is a village called Boca del Rio—the water is fresh just within the bar, and fish are plentiful."

THE directions quoted above can be found after a diligent search in an old "Sailing Directions to the Caribbean Sea and the Gulf of Mexico," written in the old days of sailing ships, when good fishing grounds were always entered on charts as indicators of the presence of fresh food. We can hardly conceive the buccaneers of this, the old Spanish Main, hailing a good fishing ground as a place of sport after a sea trip of, say, one hundred days on "salt horse," beans, and hard-tack. Confront the modern, perennially optimistic sailor man with the same possibility of fishing, and rods and gear are resurrected, there is much furbishing of tackle, and it is open season for any and all species of fish story.

Boca del Rio can hardly be called a village at present—unless a railroad station and the ruins of an old sugar mill justify the name. It lies in an indentation of the Mexican coast, about six miles south of Vera Cruz. For its size nothing can equal its picturesqueness. A two-story station in Spanish style, the skeleton of an old Spanish sugar mill, a railroad bridge guarded from the rebels by soldiers, and a few Indian Nipa huts —this is Boca del Rio, sheltered at the river mouth by a bar, over which the rollers break all the time.

The good samaritan of sport who first drew our attention to this obscure quotation in the "Sailing Directions," as I recollect it, our navigator, was the agent through whom a virgin tarpon field was opened, probably the greatest tarpon field in the world to-day. It has not been fished and one almost feels that a year's stay on the field would result in so taming them that they would literally eat out of the hand.

We had been ordered to Vera Cruz

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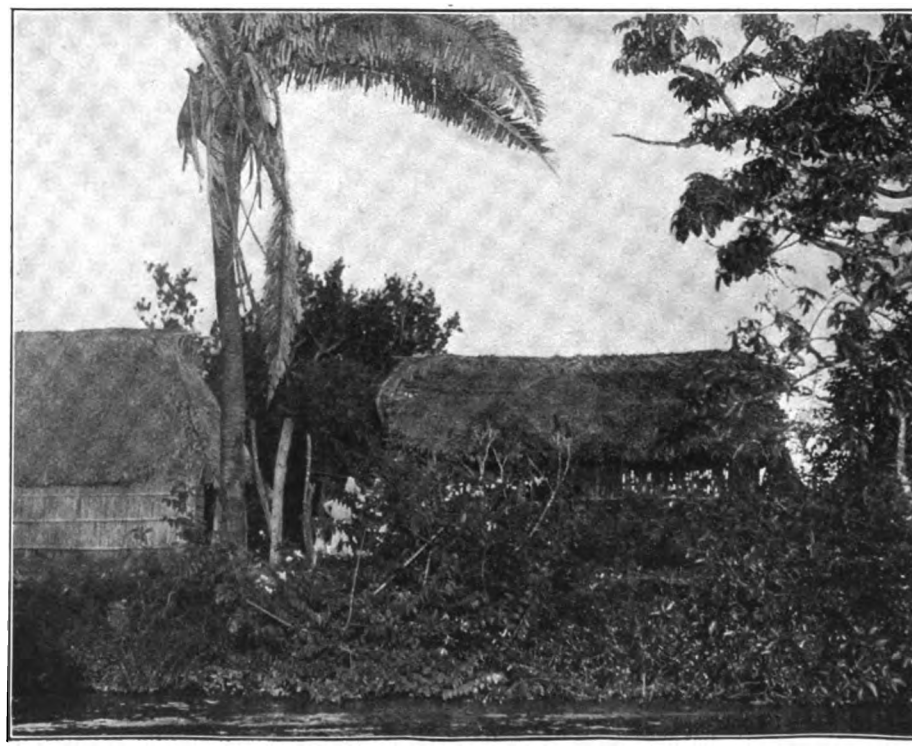
for an indefinite stay. The solitude of the Mexican coast confronted us with the added gloomy prospect that probably we would not be allowed to land on Mexican territory. Naturally the Nimrods resurrected their gear and expressed repeated hopes that we might get to Tampico and have a try at tarpon.

One of our mess had landed a small tarpon at Key West nine years before. He was the only member of the mess that had ever seen a tarpon in its native element. The mess arguments that revolved around the Silver King would have astounded any but the veriest tyro, nevertheless they were earnest and sincere, and led to much searching of encyclopedias, fishing books, etc.

The ship arrived in Vera Cruz, the historical, on a beautiful Saturday morning. Probably no other harbor in the world, unless it be Yokohama, with its Fujiyama, has so wonderful a pointer as Orizaba, whose snowclad peak rises in the distance to a height of 17,500 feet.

Inquiries ashore developed the fact that the nearest known tarpon fishing was one hundred miles away at Tampico, the Mecca for all fishermen in these parts. I have talked with dozens of men here in Vera Cruz who make their annual pilgrimage to Tampico and could not find one with a tale that could thrill after one day at Boca del Rio. Neither could I find one who had ever heard of these wonderful fishing grounds that lie at their door.

Fishing on the reefs outside of Vera Cruz for barracouta, kingfish, Spanish mackerel, and red snapper furnished good sport for a time. A thirty-seven-pound barracouta, measuring four feet eleven inches long, with a jaw opening eighteen inches, is no child to fondle. One of our guests from Mexico City smashed his gear on his first barracouta, and the fish went off with the pieces. He presented a very rueful appearance until I had explained the fish to him. I might almost grant him a tie to my thirty-seven-pounder. He certainly looked formidable in the water.



INDIAN HUTS ALONG THE SHORE

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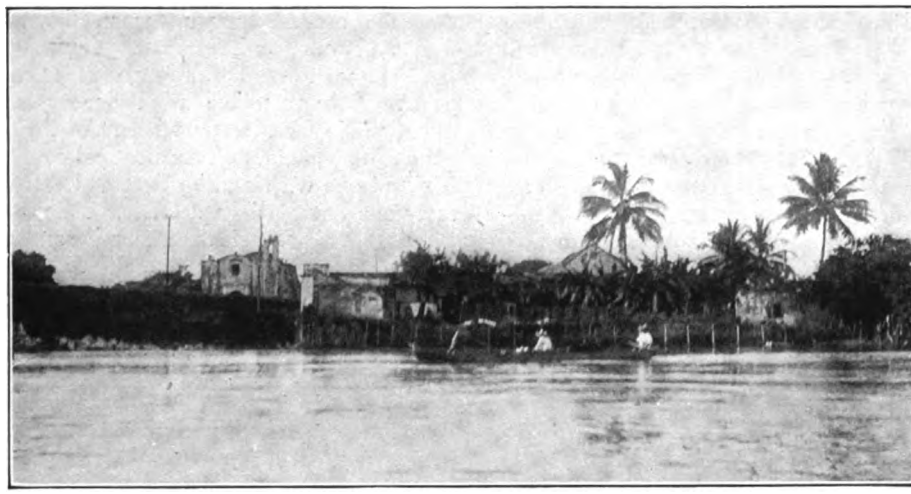
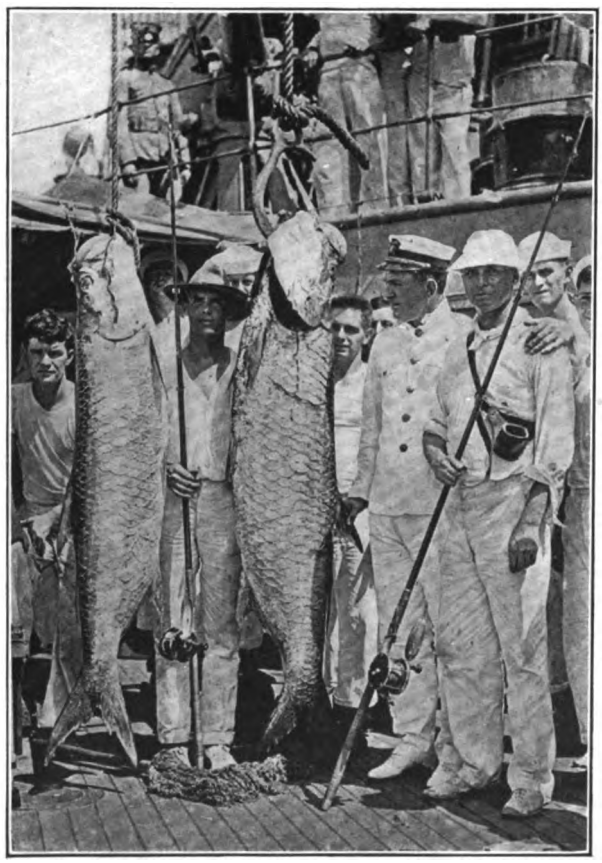


BOCA DEL RIO CAN HARDLY BE CALLED A VILLAGE AT PRESENT

Our real fishing began when Boca del Rio was unearthed as a prospect. A scouting party went forth at dawn to investigate what the old writer meant by "fish are plentiful." And here enters in all his majesty the Silver King.



EACH OF THEM CLOSE TO A HUNDRED POUNDS

The investigating party returned with innumerable small barracouta, which they scorned, but with wild, unbelievable tales of *great schools of tarpon.* Their descriptions of tarpon jumping all about were so vivid that it was only necessary to shut one's eyes and listen to the splash. The party claimed twelve tarpon strikes in an hour. No silver king, however, graced their catch.

Of course, the mess hooted. Each meal became an angora outing. Such argument from any of the stay-at-homers as "Either you have the wrong gear, or are not fishing right," was considered very bad taste. However much ragging our pioneers received, their stories could not be shaken, and, probably for the same reason that a sailor will invest in any old wildcat stock, there was much quiet cabling for tarpon outfits.

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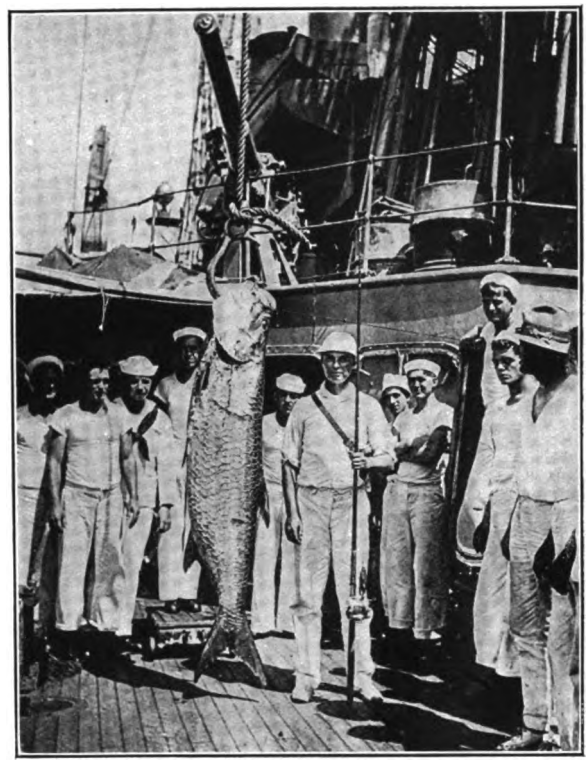
My first visit to Boca del Rio was full of thrills. Up at four and away at four-thirty were the orders. Our equipment consisted of a forty-foot motor-boat with a dinghy towing alongside, and a twenty-six-foot motor dory; the two smaller boats were used to land the fish.

After leaving Vera Cruz we passed between Sacrificios Island and the mainland. In the darkness the waves breaking on the reefs on either side were almost ghostly. Rounding Mocambo Point, we sighted a hill on the coast near the Medellin River mouth. We still had to skirt the reef to the southward of the point, which in the darkness was a ticklish job, but we finally sighted the marker off the southern end and all was well. This marker is an old marine boiler, an appropriate but gruesome monument to some sea tragedy of the past.



HUNDRED AND SEVENTEEN POUNDER CAUGHT ON A NINE-OUNCE ROD

We reached the river mouth just at dawn and the unbelievable burst upon our sight—the silver king jumping and displaying his silver sheen to the rising sun. There they were in *great schools* porpoising on the surface, plumes defiantly flung forth in all their pride as

"AT THE ENTRANCE TO THE RIVER THERE IS A VILLAGE CALLED BOCA DEL RIO"

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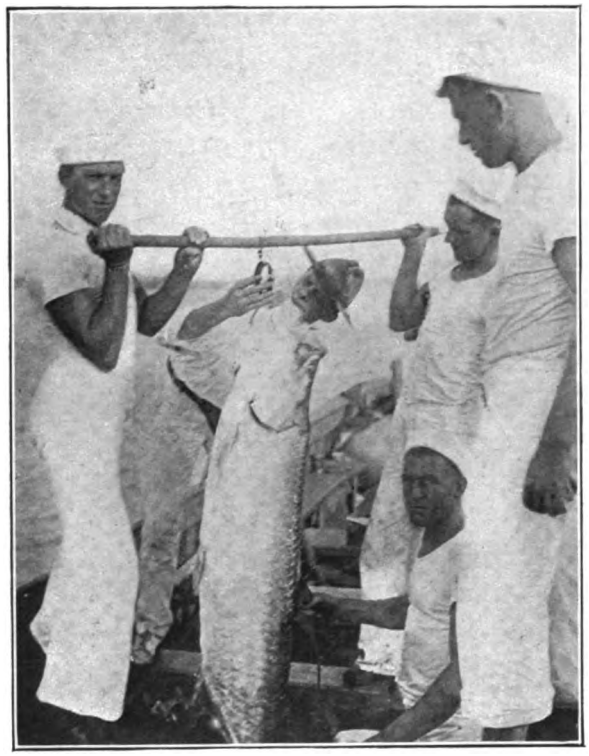

THE ACID TEST OF VERACITY

the king of game fish. Surely this is a sight of a lifetime and one that could only be found on a virgin fishing ground. And here I would like to state that in this unknown locality, where they had never experienced the hook, our tarpon defied many of the rules as we know them from Tampico, Galveston, and Florida.

"There he jumps!" Spoons were soon out and reels humming. At times our boats were surrounded by schools, and we could run through or around them and actually drop our spoons at their mouths. We were tyros all, and at first it took many strikes to land the fish. We used a very large and heavy spoon. After deciding that this weight helped the tarpon throw the hook from his mouth, I tried live bait, a mullet hooked so it would spin. I had had seven strikes on spoons and was rather discouraged. Imagine my joy when I landed the very first strike on live bait. It took one hour and forty-five minutes. The fish weighed eighty pounds and measured six feet and no inches. We landed him about four miles from where he was hooked.

It was noticeable that as each hooked his first fish, at some stage of the fight he was uncertain whether he had the fish or the fish had him. One fish was considered a day's sport, and the work incident thereto was rewarded by a seat under the cool awning and the right to make any unwelcome remarks that came to mind. The first fish taught some of us many of his tricks, although each seemed to have an evil genius of his own.

Many humorous incidents marked our fishing parties thereafter. We were very anxious to snap a tarpon in the air, and to this end one of the party generally manned the kodak. A particularly large and active fish was hooked by our First Lieutenant; after jumping several times close to the boat, he proceeded to sulk. By this time our photographer had unlimbered and, after possessing himself with patience to the bursting point, exploded with "Make him jump, make him jump!" The Nimrod, who was using a light nine-ounce rod, cannot be held responsible for his reply. Even the censorship of a Comstock could not remodel it into polite language. Incidentally the momentary distraction cost him his fish. "Make him jump" became a byword for many a day.

On another occasion a ludicrous and near embarrassing incident occurred. We had as guest this day the surgeon from another ship. He hooked a ninety-pounder from the stern of the large motor-boat, and simultaneously I hooked a seventy-four-pounder from the stern of the dinghy alongside. They jumped so close together that they appeared to be one and the same fish. Everybody in the motor-boat tried to transfer the surgeon to the dinghy that he might land his fish. Between jumps I protested loudly that the dinghy was already engaged. Can the reader conceive the riot

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had the surgeon got into the dinghy with me and had the two tarpon, one hundred and sixty-four pounds of fish, conceived the idea of going in diametrically opposite directions at the same time.

On this occasion, due to the bustle incident to casting me adrift, the gaff was overlooked. This fish jumped so frequently that we lost all count after the thirtieth jump. As a result, he was alongside ready for the gaff in five minutes. When no gaff could be found it became a fight to the death. In twelve minutes we brought him aboard by hand dead. This is the only case of the kind that I have ever heard of and the time is creditable. Had there been any means of casting him adrift while there was still life in him, I should certainly have done so. His gameness won the admiration and respect of all. He had spent five minutes out of the twelve in the air.

I am glad to say the Surgeon landed his 90-pounder over the high freeboard of the motorboat. His gear, which was borrowed, literally fell to pieces after he had landed his fish—time, thirty-two minutes.

One particularly large and game fish that I had hooked rushed the boat consistently and it was impossible to keep him away. Finally in one of his jumps he struck the gunwale of the boat so hard as to knock all hands down. He hung balanced on the boat for an instant and then plopped into the water. His side had a nasty gash about a foot long. I fear he fell victim to a shark, for something sliced my line neatly several yards from the leader.

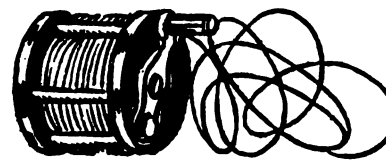
Many and heated were our arguments about mullet and mackerel as bait, my theory, as stated above, being that the weight of the spoon was a distinct advantage to the fish. There are many devotees of the sport hereabouts (all of whom go to Texas or Tampico for their fishing), and without exception they expressed surprise that we used a spoon. Mullet and mackerel were their choice.

With this in mind I shifted from spoon to mullet and experienced a reversal of form from bad to good luck. The fish hooked easier and stayed hooked. Upon looking into the matter further I decided that there was an appropriate time for each, live bait and spoon, and this point was developed by experiment.

The fish came in near the bar to feed at sunrise, and between 9:00 and 10:00 A. M., having finished feeding, started down the coast to the southward. While on the feeding-grounds live bait, either mullet or mackerel, would get a strike immediately. Later, after feeding-time, the mullet could be trailed in vain. It had no attraction whatsoever, but the fish would still strike at the spoon. It is an unusual sight to see these great schools porpoising as they travel down the coast, bound for salt water. They leave the feeding-grounds with the regularity of an express train and always follow the same route, this being the direction of the river current.

There are many ways of hooking the bait, the simplest of which is as follows: Enter the hook behind the right gill and bring it through the head and out just inside the left eye. The bait will spin in the proper direction to lay the line and the head bone is so hard that the bait cannot tear away. It is unnecessary to wire the mouth as in any other method. In using live bait there is but one precaution. *It must be fresh.*

My conclusions are that both bait and spoon have their virtue; that the judgment of the fisherman in his choice is the winning element. The secret lies not in attracting but in hooking, and, having hooked, in outthinking the fish.



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FOOTBALL ROLL OF HONOR

Selected Annually on the Advice of the Most Prominent Coaches of the Country

Ends

O'Hearn, Cornell
Merrilat, Army
Gilchrist, Navy
Hogsett, Dartmouth
Fritz, Cornell
Wagoner, Pittsburgh
Cherry, Ohio State
Reber, Kansas
Hardwick, Harvard

Tackles

Talbot, Yale
Buck, Wisconsin
Butler, Wisconsin
Kirke, Iowa
Halligan, Nebraska
Brooks, Colgate
Storer, Harvard
Patterson, W. & J.
Probst, Syracuse

Guards

Munns, Cornell
Brown, Navy
Ketcham, Yale
Pennock, Harvard
Geissman, Ohio State
Gallagher, Missouri

Center

Simpson, Pennsylvania
Patterson, Michigan
Des Jardien, Chicago
Garlow, Carlisle

Quarterback

Prichard, Army
Wilson, Yale
Llewellyn, Dartmouth
Hughitt, Michigan
Barrett, Cornell
Marshall, Pennsylvania
Huntington, Colgate
Hightower, Northwestern
Russell, Chicago
Welch, Carlisle
Dorais, Notre Dame

Halfbacks

Law, Princeton
Whitney, Dartmouth
Young, Pennsylvania
Craig, Michigan
Guyon, Carlisle
Fisher, Oberlin
Gray, Chicago
Dick, Iowa
Rutherford, Nebraska
Spiegel, W. & J.
Castle, Syracuse

Fullback

Hudson, Trinity
Swartout, Colgate
Graf, Ohio State
Reeds, Oklahoma
Brickley, Harvard
Dunn, Dickinson

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FOOTBALL LESSONS OF THE YEAR

A Review of the Past Season Shows That Several Vital Points Have Been Established

WHEN the football season is over the real task for the friends of the game is still to be done. What are the lessons that have been learned during the year? What fallacies have been exposed? What fundamental facts have been established? Those are the matters with which this review will be chiefly concerned. We have little interest in championships and not much in scores, save as they throw light on the real development of the game.

First and foremost, it has been proved this year beyond doubt that there is a way to score and even to cross the goal line against a coherent, vigorous defense. This is the point which has been most discussed since the new rules were put in force. Tie scores, coupled with apparent inability to send the attack home inside the opponents' fifteen-yard line, have led many to the conclusion that the new rules had placed too heavy a handicap on the scoring game.

It is a question of importance only as between well-matched teams. The strong team can score on the weaker with almost any kind of a play. With two teams that are playing each other to a standstill in the final argument it becomes a problem largely of strategy—which, by the way, it has always been. Critics of the rules may recall certain one-yard stands even in the old push-and-pull days.

What, then, has the season contributed in this respect? In the first place, a greatly increased emphasis on generalship all the way down the field. The team that makes a judicious use of the kicking game, either actually or as a threat, combined with "long-gainer" plays, is liable sooner or later to place itself in a position to drive home the score. The last stage of this progress is the supreme test of generalship. In the East two means have been called into use for putting the climax to the attack, which were fittingly illustrated by Harvard and the Army in their final games. The former, having in the person of Brickley a supremely skilful drop kicker, chose the aerial rout over the goal posts. This method cannot be criticised on the ground that it was a one-man performance. In the first place, it was of dependable value only as part of a well-built attack directed toward the drop kick as the finishing touch. Secondly, it can safely be asserted that if Harvard had not had a Brickley—as well as two or three other capable performers with the toe—they would have devised a different and still effective means of landing the final punch. In other words, the wise coach builds according to his material and scores with the means that he can best command.

In the case of the Army there was shown a skilful use of the forward pass as an actual scorer combined with the long-gainer plays at the right moment. The final lesson here again is that of a wise choice of plays according to the material at hand and generalship in their use on the field.

Around the forward pass a considerable controversy has been waged. The West is generally represented as having far greater confidence in it than has the East. One may be permitted to doubt this, at least in the extreme forms in which the statement is frequently made. As a legitimate part of a well-constructed attack, either in actual use or as a threat,

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it has its place, but few end-of-the-season games will be won with the forward pass alone. The Army ably demonstrated both its value and its danger. On the positive side their choice of it was excellent as to time and their play sterling at the vital moments. On the other hand, their defense against it was practically invulnerable, so that the Navy was never able to employ it to advantage. Had the Navy defense in this respect been up to the standard of the Army, especially in the matter of blocking the receiver instead of the ball, it is highly probable that the Army score would have been minus two of the touchdowns that now adorn it.

Forward Passing at Notre Dame

In the West one of the finest lessons in the use of the pass was given by Notre Dame. In Dorais they had a quarterback whose handling of the ball was sure and fast, and the receiving end was equally well coached. Added to this was the fact that the Army ends in the game at West Point waited out and gave plenty of time for the pass. At times four men were down the field on the play, the pass being made to the one who was uncovered. In the few cases where the defense was too strong the ball was grounded where the quarter stood, thus averting the danger of an intercepted pass.

So far as the major games in both sections were concerned in only the Army-Navy contest was any particularly effective use made of the pass. From this it is a fair inference that an active team in top form can usually be relied upon to spill this play often enough to render its use abortive save as one part of the general scheme.

Another point about which much argument has revolved is the so-called open game. In nine cases out of ten this means the forward pass in the mind of the critic. Aside from this play it is doubtful if many people really know what they do mean. It is a case for definition. One of the New York papers commented on the Dartmouth-Carlisle game as proof of the efficacy of the open style of play. To be sure! It was open —wide open—after the Indian line had shoved the Dartmouth forwards out of the way and let the runner through with a stream of interferers. Any team can play this kind of open game if they have a good enough line. But we suspect that some people are still thinking about those fifty and seventy-five-yard end runs that happen now and again, and always have happened—now and again. If anyone can show how this kind of play can be made as a steady thing against all sorts of teams he will confer a great benefit. As a matter of fact the whole object of the attack is to gain as much ground as possible down the field in proportion to lateral distance covered. A slap-stick makes a lot of noise, but a rapier does more execution. This sounds elementary, but it is necessary to know it in order to see the fallacy in the so-called open game. A run off tackle is open if you can get the runner clear, and a run around the end is neither open nor anything else against an end that refuses to be turned in or a tackle with an annoying habit of boring through to the man with the ball.

Even in the West, the alleged home of the open game, the chief reliance in the final pinch has been in the sharp drive through the line or just off tackle. In the Chicago-Minnesota game Chicago made twelve first downs and in seven out of the twelve at least three downs were required to make the distance. Minnesota counted thirteen first downs, requiring at least three downs in all but two of these cases. This is hardly open play in any spectacular sense. Michigan defeated Pennsylvania with line drives primarily, combined with superiority in the kicking game, both in use and as a threat. In other words, wise coaches, East or West, teach the type of football best suited to their material and good quarterbacks choose the plays best calculated to gain under the particular circumstances. That's about the case for the "open game." If you mean, however, "versatility," that's another story.

How about particular teams, their contributions, their strength and their weakness? Here it should be stated at the outset that no attempt will be made to rank the various teams other than with

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respect to their particular features. Comparison of scores is futile at best, and as for championships, "there ain't none." In the East Colgate lost to the Army seven to six and then defeated Yale sixteen to six. Yale held Princeton to a tie and lost to Harvard, fifteen to five. Harvard could beat Princeton only three to nothing. What's the answer? There is none. As for guessing, it is our guess that on the day of the Yale game Harvard could have beaten either Princeton or Colgate much more impressively than they did Yale and that the Army would have made a stronger showing than either Princeton or Colgate. All of which is only a guess.

Harvard at Her Best

Harvard had a well-balanced team that was at its best in its final game. Their interference was of a high class, with the maximum of power and speed. The men had been coached to keep going until the play was definitely stopped, and even after, and their blocking was hard and usually effective. With a line that was only mediocre in the quality of material, good coaching had produced the right results and in the final test Pennock at guard was matched only by Ketcham and Talbot in the opposing line. As always, Harvard had a strong backfield with three men who were hard to match at the running game, and combined with a driving interference their sharp, lance-like thrusts off tackle were more than ordinarily effective. From end to end it was a team that knew the game as few Harvard teams have known it in the past.

Yale had a hard season with alternating sunshine and cloud—mostly cloud. Bothered with numerous injuries received during practice, confronted with a task that was probably allowed to loom larger than it should, carrying over little impetus from the previous year, they pulled together at the end of the season and showed that they are on the right track. Their style of interference is quite similar to Harvard's in principle. The idea of building a solid wall to protect the runner has been abandoned for a swift-moving, alert style in which individual interferers take care of individual opponents in a way that promises well for next year. The great weakness was lack of versatility in the attack and a failure to mask the runner sufficiently, combined with a lack of speed in coming up to the openings which destroyed much of the value of a good line.

In the case of Princeton it is well to speak with reserve. From the standpoint of the outsider Princeton seems to have gone back rather than forward in the type of play used. This year it was largely a case of unusually good material wasted and a frantic attempt to make undue use of one or two individuals. A good football team cannot be built around one man, be his name Baker, Pendleton, or what not. As in the days of Pendleton, Princeton men prophesied the great things that would happen when Baker got loose for a long run. The natural consequence was that their opponents took good care that Mr. Baker should not get loose. Someone should break the news to Princeton, also, that something beside a near-Minnesota shift is needed as a basis for an attack, and that an end who has been coached to wait out for the play to come to him is wasting half his value and throwing an undue burden on the secondary defense.

Turning from consideration of the "Big Three" in the East, there is Colgate looming large among the smaller teams. Her defeat by the Army was in reality a victory and her win against Yale was well earned. Her play was simple in conception, but fast and sure. No team that the writer has seen during the past season has started so well or carried so much drive through in all the plays. Their success drives home the lesson of pace that has been so well learned in other sports.

Dartmouth finished under a cloud that was not all deserved. A succession of stiff games, combined with a tremendous amount of railroad travel, could not help but take the edge off the men, although this is not said to deprive the Indians of any of the credit for their victory in New York. Princeton, Pennsylvania, and Carlisle in successive weeks are too much to ask of any team.

Cornell came to the end of the season

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with a very pleasant experience, a defeat of Pennsylvania for the second time in more than twenty years. Pennsylvania has had a disastrous year, but there have been occasions in the past when such an apparent opening has been offered to Cornell and they have found themselves unable to take advantage of it. This time they had the necessary punch and despite the loss of O'Hearn, their star end, they drove it home. Cornell has the hard problem of building up both a football team and a proper football spirit in the university, and this victory will help immeasurably.

Chicago at the Top

In the West first mention belongs to Chicago. Illinois, Minnesota, and Wisconsin fell before them in succession. There are many regretful memories of the old Michigan-Chicago games that were wont to close the season, but we must be content with mere memories. The Midway institution had a real football team this year, balanced from end to end, strong on both attack and defense, as a good team must be, able to use the forward pass on occasions and to get along without it on others, a versatile team that could have given an interesting argument to any team in the country. Year in and year out Mr. Stagg probably has the poorest material to choose from of any of the four larger Conference teams, and his record is evidence of his ability as a builder.

Michigan had a large repertoire of plays, but the main resort in the tight places was on the maximum power and drive that could be obtained from relatively simple formations whose aim was to get the runner to the line of scrimmage in the shortest possible time. Few Michigan teams in recent years have been better handled.

From Minnesota came murmurings of lack of confidence in Dr. Williams, which died away after the defeat of Wisconsin. In view of Minnesota's really good showing against both Chicago and Wisconsin, it is difficult at this range to see what basis there was for them in the first place. Minnesota usually has strong men in the line, but could well take a leaf out of Harvard's book in getting the most out of the backfield.

The brief mention that has been made above must suffice for teams. The object has been to mention only those whose play seemed in some striking way to illustrate some phase of strength or weakness in the progress of the game. Many have been omitted that deserve place, such, for example, as Washington and Jefferson in the East, the Michigan Aggies in the West, Nebraska in the Missouri Valley Conference, and Texas in the Southwest.

In writing of individuals the temptation is always toward comparison. Is this man better than that? What would that other man have done on a stronger team? As a matter of fact, no such process is necessary. A player is a player, no matter what his team or what the scores showed at the finish. The list that precedes this review is made up after consultation with and advice from the various coaches of the better-known teams of the country. Each man named there has been approved by at least two coaches. It is not possible, of course, to discuss the work of all these men in detail, and as in the case of the teams the effort will be made to select those players whose work offers some special lesson or drives home some particular point worth noting.

Taking individual positions in turn, it has been a long time since an end appeared of higher caliber than O'Hearn, of Cornell. He has everything that a good end should have, including brains. His type of play is the modern type, going in to meet the play as it comes at him and dragging down his man or breaking the interference to give the secondary defense a good opening. He keeps his feet well and can be counted on to carry the ball. Merrilat, of the Army, and Gilchrist, of the Navy, were both fast down the field on kicks, Gilchrist being a little surer on tackles, which was discounted by Merrilat's ability as a ground gainer. Wagoner, of Pittsburgh, was an end of the hard smashing type who broke through to his man by sheer strength. From farther West the best reports have come of Cherry, of Ohio State, none of the other Conference teams seeming to

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have developed men for this position who were above a good average.

Of the tackles, the West seems to have had the advantage, although no team could ask for a better man than Talbot, of Yale. Brooks, of Colgate, was also a man of experience who seldom failed to diagnose the plays and get through to them. Wisconsin rejoiced in a pair of good tackles whose strength was largely minimized by the failure of the backfield to take advantage of the openings and the cover afforded.

At the guard position Pennock, of Harvard, was a man who came into his stride late in the season, but had few equals when he struck it. Ketcham, the Yale captain, was strong at either guard or center, the loose style of defensive play that is fast coming into favor giving him full opportunity to show his ability. Incidentally this same type of play enabled Harvard to build up practically three lines of defense against Yale, thus showing what can be done with the right kind of men under such circumstances. Munns, of Cornell, also a captain, was not only a good guard, especially at breaking through, but before the end of the season he showed his caliber as a leader. Few players showed greater willingness to give everything all through the game.

Of centers there are surprisingly few that seemed to find high favor. Des Jardien, of Chicago, is an old favorite who made good in every game, passing steadily and usually outplaying his man either at blocking or breaking through. In the East one of the evils of the season was the apparent inability of the coaches to find centers who could be relied upon for passing. A sample was the work of the Princeton center in the Yale game. Here Law, who was doing the kicking, was compelled to take passes all the way from the ground to arm's length over his head. In this respect the records of both Simpson, of Pennsylvania and Patterson, of Michigan, were clean.

Of quarter-backs, there are enough and to spare, which is gratifying in view of the increasing weight of responsibility at that position. It will be a long time before a better man appears than Huntington, of Colgate. His handling of the ball was faultless, and his running of the team usually of a high order. On the defensive in the back field he was sure in his tackling and ready to run back punts if half a chance offered itself. Close contenders in this section were Llewellyn, of Dartmouth, and Pritchard, of the Army. Dartmouth's touchdown against Princeton was due in large measure to Llewellyn's ability to outguess the Princeton defense, and in the Army game Pritchard ran the team to victory. It would be possible to pick flaws in his choice of wide-flung plays when short jabs or a kick into the corner would have seemed better judgment, but when it came to actual scoring his judgment was approved. His handling of the forward pass with Merrilat at the receiving end was sure at the critical stages, and that is what really counts.

Quarter-Backs to Spare

A man who must be reckoned with is Hughitt, of Michigan. Reports indicate that he is the best man for the position who has appeared at Ann Arbor in many moons. Hightower, of Northwestern, was a strong man on a weak team, practically the only man in the aggregation who made a more than mediocre showing. Barrett, of Cornell, could be either quarter or half and in addition is a more than good punter. Wilson was an Eli find rather too late in the season for proper development, but barring a bad guess in the critical moment of the Princeton game he showed good headwork. It is more than likely that the choice of plays at that time was not his own. Wilson was especially strong on defense in close plays through the line.

Among the half-backs there is an abundance of good material. All things considered, Mahan, of Harvard, is probably the favorite among Eastern players. He is fast, hits the line hard, and holds his feet well. His chief weakness, comparatively speaking, is a tendency at times to stray away from his interference. In addition he kicks well and is an understudy to Brickley in making goals from the field. One of the most promising finds of the year was Law, of Princeton. This young man has a little of every-

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thing. He can run, kick, tackle—he has done all three with energy and effectiveness—and in addition he is blessed with the kind of brains and courage that are a joy to see on the football field. Watch for him next year. A sterling combination of speed and strength was Craig, of Michigan. We naturally expect the former of an Olympic star, but there have been other sprinters who failed to make good on the gridiron. Craig is not in that list. In these days when so much depends on the ability of the back-field in secondary defense, a half-back must be able to stand up sturdily against a constant pounding attack. Both Law and Craig showed that they could do this. One of the best plunging backs of the year was Whitney, of Dartmouth, another Olympic hero. He has strength and is not afraid to use it all at the moment of the drive into the line. His bucking against Princeton on a slippery field was a marvel of surefootedness.

When we come to the full-backs, there is, of course, but one name among Eastern players that comes at once to mind—Brickley, of Harvard, the man who scored five field goals against Yale and won the game with a single goal against Princeton. It would be a mistake, however, to assume that this player is nothing but a drop kicker. His build and strength fit him admirably for line-breaking, and he has speed enough for all purposes in the open. His tackling is deadly in most cases, and his share in the interference usually well attended to. But there are other full-backs beside Brickley. For example, there is Hudson, of Trinity, a heavy man who handles his weight like an acrobat. Graf, of Ohio State, is another man who could come close to qualifying for any team in the country, and Oklahoma offers a candidate in the person of Reeds, who is represented as the best man in the position in his section.

And there you are. The season is ended and most of the tears have dried by this time. It was one of the best football years in a long time and all reports show a greater interest in the game and a great development in the type of play. Probably Yale could beat Oklahoma—this is purely a supposititious case—but probably the game the two teams would play would not be greatly dissimilar in principle and basis. This is as it should be. The past season has shown more gratifying development along this line than has been seen in any other year within recollection. After all, however much we remember the scores and gloat or weep over them, the game's the thing. That is a motto that might well be inscribed over the entrance to every football field in the country.

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HOW TO PREVENT TIRE TROUBLE

By M. E. FABER

Common Sense Ways of Prolonging Their Life and Cutting Down the Cost of Running a Car

IF all the articles that have ever been written about the care of tires were boiled into one, we would find a few warnings like these standing out in big black type:

Keep your tires well inflated.

Avoid ruts and car-tracks.

Don't leave puddles of oil on your garage floor for the tires to stand in.

Seal casing-cuts and sand-pockets as soon as they appear.

The first and last of these commandments are the most often broken, because they are not quite as obvious to the motorist as the others. Possibly, too, the fact that they require a certain amount of effort on the motorist's part causes their importance to be underestimated.

Let us go over a few of the most common causes of tire failure and their remedies. First, of course, comes the question of inflation. Novices are usually afraid of inflating their tires too much, with the result that they rarely get them up to the required pressure. It is practically impossible to over-inflate a tire with an ordinary hand-pump. For the guidance of those who use power-pumps, the following pressures are recommended for various-sized tires:

3 inch	50 lbs.	4½ inch	80 lbs.
3½ inch	60 lbs.	5 inch	90 lbs.
4 inch	70 lbs.	5½ inch and over	100 lbs.

Rear tires should carry five pounds more than the above table.

During the first ten days they are used tires should be kept strictly up to the required pressure, as they stretch somewhat, and the air pressure is consequently diminished. After this period, if tires need to be pumped up oftener than once in two or three weeks, look for a puncture or a leaky valve.

Of course, an entirely deflated tire should never be driven on, as it is sure to be damaged beyond repair. It is far better to remove the tire and proceed with a few turns of rope wrapped around the rim, or even to drive on the bare rim.

Usually these extremes are unnecessary, as extra tubes and a casing are carried for such emergencies. Unless these are properly cared for they may not be in usable condition when they are most needed. Tubes ought to be folded, tied with wide tape, and carried each in a separate bag of soft cloth that has been well dusted with soapstone on the inside. Never throw a tube loosely into the tool-box or under the back seat. It might as well be thrown away. The tools will chafe and the oil will rot a tube in an incredibly short time.

The spare casing should always be protected from light, heat, and dampness. So many good tire covers are to be had that the motorist will hardly be without one. Take care after a rain or after washing the car that no water has got inside of the cover.

The one thing that causes more tire trouble, needless expense and bothersome delay than insufficient inflation is the neglect of small cuts in the treads of casings. Their greatest danger lies in the fact that they appear perfectly harmless until actual trouble results. It is too easy to neglect a cut that does not cause any immediate inconvenience or attention. But never has the truth of the old adage about a "stitch in time" been more forcibly illustrated.

The important function of the rubber

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on the outside of a tire is not to absorb road-shocks, but to act as a waterproofing cover for the fabric, the sinew of the tire. Evidently, then, this waterproof cover must be kept intact if maximum service is to be expected from the fabric.

A stone-cut half an inch long usually means the loss of thousands of miles of service and a blowout at the most inopportune time. Sand and water will be ground into it, first filling the cut and then, as the grind of service continues, spreading between rubber and fabric and forcing them apart. The sand will cut and the water will rot the fabric until the inevitable result, a blowout, occurs, with its consequent inconvenience.

Paradoxical as it may sound, but one remedy has ever been found that is also a permanent cure. It is vulcanization. With the portable vulcanizers now on the market this is a simple process, and one that can be safely performed by any motorist or chauffeur. The tire does not need to be removed from the wheel, or the wheel from the car. The hole is cleaned with gasolene and sandpaper, then coated with vulcanizing cement. After the cement has dried for a few minutes the hole is filled with scraps of uncured rubber. Then the vulcanizer is clamped on the fully-inflated casing and left for fifteen or twenty minutes at a temperature of about 265 degrees Fahrenheit. The result is a weld of the new and old rubber, that after a few miles' running cannot be distinguished from the remainder of the tire. In short, the tire is, so far as that injury was concerned, as good as new.

The same process is used in making tube repairs which no amount of service will loosen. No more time or skill is needed than to apply a cemented patch, and the result is permanent.

Aside from its general mechanical construction, simplicity, durability, etc., the most essential feature of a vulcanizer that every motorist should determine before purchasing is whether there is a temperature control. Crude rubber vulcanizes to the consistency of that in an automobile tire between 250 and 275 degrees Fahr. only, so it is absolutely necessary that the temperature be maintained above 250 degrees to secure vulcanization, and yet below 275 degrees to prevent overheating. The necessity for temperature control is quite as great on steam as on electric vulcanizers, and is usually secured by a thermostatic device that is incorporated in the apparatus, where it is affected by the slightest change of temperature.

Thus we find that with a small amount of attention given to the care and repair of tires a great deal of trouble can be avoided, mileage can be doubled or trebled, and the time lost in roadside delays minimized.

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THE WORLD OF SPORT

Our Game Refuges There are in this country one hundred and three Federal reservations for the protection of wild life. These are scattered all the way from Porto Rico to Hawaii and are to be found in twenty-seven States and Territories. In addition there are numerous State refuges of which no complete list has been made. This list looks rather imposing on paper, but as a matter of fact it is only a tenth part of that which should be done. Comparatively few of these refuges have been stocked, and many of them are not yet sufficiently guarded to make them serve their full purpose. To quote from the Biological Survey Bulletin, "Most of the refuges are on waste, mountain, or marsh land, or on small islands of no agricultural value. When compared with the series of extensive parks and game preserves created in Canada in recent years, or the still more extensive game preserves in the British Colonies in Africa, the area devoted in part to the increase of wild life in the United States is still very small."

More To Be Done Still we have done fairly well for a beginning—if we will be honest with ourselves and admit that it is only a beginning. The area included is small. The ten national parks and five military parks which constitute really effective refuges have an area of less than five million acres. There are only fifteen refuges in addition to these which are large enough to amount to a great deal, and three of these are practically under State direction. Those which are entirely under Federal control are divided among seven different departments of government, the majority being charges of the Department of Agriculture. There is no good reason apparent why they should not all be under the control of this department, especially as it has been made responsible for the enforcement of the new migratory game bird law. Doubtless this will be done as soon as practicable, but in the meantime it would not be a bad idea to write to the Bureau of Biological Survey in Washington for a list of the game refuges in order that you may find out just what is being done in your section for the advancement of this highly necessary work. Incidentally it would be worth while to know why only one Eastern State has a national bird refuge. That is Pennsylvania with its Gettysburg Park. It could hardly be because the others do not need the refuges.

Do It By Treaty Apropos of bird protection, the American Game protective Association is fostering a treaty with Canada which will clinch the work begun by the Weeks-McLean bill. The Bulletin of the Association declares that such a treaty would:

"1. Protect during nearly the complete line of their flight most of the migratory species found in both countries.

"2. Set at rest forever any talk as to the constitutionality of the Weeks-McLean law. The regulations that have been promulgated under authority of that law are made part of the proposed treaty. It is, of course, beyond the authority of any court to alter any part of a treaty."

The Attorney-General of New York is reported to have volunteered the opin-

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ion that the bill is unconstitutional. This is straining the doctrine of State's rights unduly and doing serious harm to a worthy movement. Fortunately the friends of the measure are warned in time.

Bison Coming Home The list of bison ranges in the United States is being increased to five by the creation of a range in the Wind Cave National Park in the Black Hills. The buffalo have been provided by the American Bison Society and fourteen animals have already been sent from the Bronx Zoölogical Park as a nucleus for the herd. These animals were all born in captivity so the problem of keeping them on the range and caring for them should not be difficult. The attitude of the national Government in this matter is somewhat more satisfactory than in the case of the Pablo herd which it was requested to buy. In that case, it will be recalled, the Government refused to make the purchase, and most of the finest animals in the herd were shipped to Canada, the Dominion proving more receptive. The other herds now established on permanent ranges are in the Yellowstone National Park, the Wichita National Bison range in Oklahoma, the Flathead Valley, Montana, and the Niobrara Military Reservation in Nebraska. Verily the bison is returning to his own land, as all these ranges were great grazing grounds for the bison not so many years ago.

Protection Pays Last fall a New Yorker cruising in Pamlico Sound remarked on the low price of ducks offered for sale in the local markets. Something like 40 cents apiece was the price asked. The visitor remarked that that would hardly pay for the cost of shells at the usual average of hits in good wing-shooting. Then he was informed that "they don't pay much attention to the law down here. Mostly they get 'em by shinin' 'em." Evidently the simonpure market hunter is not yet an extinct species. Shining ducks, incidentally, is not only unsportsmanlike but also illegal in every State in the Union. If it were not so before the first of last October it then became so by the prohibition in the Weeks-McLean law of shooting between sunset and sunrise. It is worth knowing, however, that market shooting is practically a dead occupation, so far as the general market is concerned around Pamlico and Currituck and the Southern grounds generally, as a result of the Bayne law in New York cutting off the big market. From many different parts of the country come reports that the past season has been the best in many years so far as the size of the flight is concerned. Chesapeake had thousands where there were hundreds a few years ago. On Great South Bay the numbers were greatly increased, and in the Middle West, Illinois and Indiana saw many more birds in the air than for some years. We are headed in the right direction.

Still a Great Team If there are any left who are inclined to be severe in their judgment of football as a good game and a useful one, they should have been present at a reunion dinner of the 1888 Yale team in New Haven last fall. That team is enshrined in the hearts of the older Elis as "Pop" Corbin's team and their record stands as an incentive and a marvel to all the younger generation. They were not scored on in the course of the season, and their total of points was 698. Their opponents included such worthy victims as the University of Pennsylvania—two games—the Crescent Athletic Club containing many old college players, Wesleyan, Amherst, and Princeton. But not only was it a strong football team, but its members have been good and successful citizens since 1888. It is twenty-five years—a quarter of a century—since that team left the gridiron, but they are all still here and in good health and spirits. Indeed, one of them, the great Heffelfinger, can still don football togs and show the Yale line what real opposition is. As they stand to-day the old lineup includes a former United States judge, one of the best-known university directors of athletics in the country, a State tax commissioner, a president of a city board of health in a large city, a former United States Treasurer, three successful physicians, one of them being a professor

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in no less a place than the Harvard Medical School; a well-known manufacturer and a minister. Evidently football was not the only game that 1888 crowd could play. Furthermore, a little investigation would show that the members of other teams at other colleges have not lagged behind in the race after graduation.

A Super-Scotch Verdict

The New York Registration Committee of the A. A. U. met in solemn council to consider the case of one Hannes Kolehmainen, accused of bricklaying, working for his board, outrunning all his competitors, and other unsportsmanlike conduct. After long consultation they announced that there were no charges against Kolehmainen, but that they reserved decision. This reminds one of the country justice of the peace who made up his mind beforehand because the evidence was so confusing that he found it impossible to decide either way after listening to the witnesses. There is also a slight flavor of the judicial methods of the Queen of Hearts. "Sentence first—verdict afterwards," said that worthy lady.

A Slaughter-House

Massachusetts needs to reconsider its open season law. The reports of the deer shooting there last fall do not make good reading. To hear of the killing of fine fat does, of the clubbing to death of one deer, of the killing of a deer in a back lot where it had come for the feed it had been taught to find there, does not make for pleasant dreams. Eye-witnesses have spoken of deer with broken legs dangling as they ran, of deer practically shot to pieces with buckshot. If Massachusetts wants to get rid of her deer, in the name of mercy do it decently and in order. Otherwise pass a game law that will put an end to this sudden riot of butchery.

Conductors as Wardens

Colonel "Bill" Sterrett, of Texas, State Game, Fish, and Oyster Commissioner, and known from one end of the country to the other as a prince of good sportsmen, has hit upon a plan that he thinks will solve the problem of detecting offenders against the game laws of the State. He has appointed railroad conductors throughout the State deputy wardens with power to collect evidence and to arrest. This is something new and like a lot of the new things, so obvious that we wonder no one thought of it before. Henceforth, when you travel in Texas you will no more regale the conductor with tales of the record bag you shot and the way you put it over on that bone-headed deputy who asked to see your license. The only way you can beat Colonel Bill's men is by obeying the law.

Governor to Baseball Leader

From Governor to president of a baseball league is a step up or down as you may happen to regard it. Governor Tener apparently regards it as a step worth taking, or else he would not have accepted the presidency of the National League as he has done. His Excellency may think he knows what trouble is, but he has a few things yet to learn, as one Mr. Lynch can probably inform him. To a casual outsider the National League seems to be afflicted with something resembling arterio-sclerosis—which is a polite name for old age. Perhaps Brother Tener can administer the right restorative. We would suggest that he apply to that sprightly youngster, Ban B. Johnson, for the prescription.

Pocketing the Rhodes Scholars

Staid old Oxford has discovered a way to keep the foreigners from winning too many athletic honors. She has decided, after much searching of heart, that Rhodes scholars should not be allowed to compete in the Freshman sports. The reason alleged is that they are older and more experienced and therefore better. To our untutored minds that might seem like a very good reason for keeping them in the hope that it might inspire the home-grown Freshmen with a desire for improvement. Apparently things don't work out that way in England. What the Oxford Athletic Committee wants apparently is a comfortable little affair with nobody having to work very hard and no rank outsiders to carry off the prizes. All of which confirms us in the somewhat unwilling belief that in field and track sports England has declined in

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both industry and spirit. As to the basis of fact in the contention of the Oxford Committee, we cannot judge at this distance. Our own guess would be that the athletic ability of the Rhodes men is being overrated because of a few unexpected performances. Most of our best men in this country have won their laurels well before they reached the maximum age of twenty-four set by the committee as the extreme limit for competition in the Oxford University Sports as distinct from the Freshmen sports.

Exercise in Winter

Perhaps you are thinking of the problem of winter exercise. Your muscles grow flabby and your lungs shrivel up without the tonic of the golf links, the tennis court, or the field. There is no real reason why you should sit idly by the fire. Winter air, wisely acquired, never hurt anyone. Don't be afraid of getting chilled. That isn't the way colds are caught. The impure air of a closed room does more harm than all the open air in creation. The principal danger to guard against is the sudden chilling of the surface after violent exertion. This is bad, but merely getting cold never harmed anyone yet. If you are so situated that you cannot get all you want in the way of outdoor exercise and perforce must fall back on the gymnasium, you are to be pitied, but not necessarily condemned. Gymnasiums are necessary evils and much good may be found in them. Personally, the writer of this has never had much use for the stale, flat, and unprofitable kind of exercise to be had with apparatus and weights and bars and all the rest of the indoor paraphernalia. They never amused him and he hopes they never will. But if you like them, then you like them, and they won't hurt if you use them wisely. But there are good games that may be played indoors. Handball, for instance; there's a game that will call out all your reserves of hand and eye and lung power. As an all-round developer it has few equals. Squash, too, is excellent, but the opportunities are limited. Basket-ball is a corker, but it is a game for young men who do not mind a little rough and tumble. If you have access to a gymnasium induce the director to introduce volley ball. Any man who can stand up and swing his arms can make a stab at this and get a lot of fun out of it. But don't miss any chances to get out in the open, no matter how cold or stormy the weather. Even a long walk on city streets is not to be despised if nothing better offers.

Getting Ready Time

This is the time to get ready for next season. No matter whether you are a fisherman, a sailor, a gunner, a canoeist, a motorist, or merely a general lover of the out-of-doors, the long winter evenings offer you the great opportunity to read the books you have been planning to study for so long and to overhaul the tackle, the gun, or the outfit. We have a friend whose keenest joy is in the making of fishing rods. And he makes good ones, too. Another is by way of being an amateur gunsmith. A third is a maker of decoys and duckboats. They are all busy men whose time, busy or idle, is worth a great deal to them. But they could put it to no better use. And therein lies one of the great charms of the outdoor life. It teaches you to make things for yourself. It shows you the man on whom you must most rely after all is yourself. Years ago a wise Russian, philosopher, geographer, and anarchist, declared that the best life was that of the man who had a vocation and an avocation—something to do after hours. The avocation of the brain-worker should preferably be something of a manual sort that involved the correlation of eye, hand, and brain. That way lies rest, recreation, and development, a valuable trio.

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NEWS OF THE OUTDOOR WORLD

Football

GAMES played during November resulted as follows: Colgate 16, Yale 6; Harvard 23, Cornell 6; Princeton 54, Holy Cross 0; Pennsylvania 16, Penn State 0; Dartmouth 21, Amherst 7; Michigan 45, Syracuse 7; Notre Dame 35, Army 13; Navy 39, Lehigh 0; Carlisle 34, Georgetown 0; Brown 19, Vermont 0; Wesleyan 20, Rutgers 9; Minnesota 21, Wisconsin 3; Virginia 34, Vanderbilt 0; Indiana 7, Ohio State 6; Chicago 28, Illinois 7; Maine 3, Colby 0; Michigan Agricultural 41, Buchtel 0; Bowdoin 10, Bates 7; Missouri 44, Rolla 14; Nebraska 18, Ames 9; Harvard 3, Princeton 0; Yale 17, Brown 0; Dartmouth 34, Pennsylvania 21; Navy 70, Bucknell 7; Army 77, Albright 0; Carlisle 61, Johns Hopkins 0; Colgate 27, Rochester 0; Michigan 17, Cornell 0; Maine 9, Bowdoin 0; Wesleyan 0, Williams 0; Rutgers 38, Hamilton 0; Amherst 38, Worcester 0; Tufts 34, Vermont 0; Syracuse 48, New York 0; Wisconsin 12, Ohio State 0; Case 20, Ohio Wesleyan 0; Miami 44, Ohio 6; Colby 8, Bates 6; Iowa 60, Indiana 0; Kansas 14, Washburn 0; Missouri 10, Drake 0; Nebraska 42, Nebraska Wesleyan 7; Vanderbilt 7, Tennessee 6; Yale 3, Princeton 3; Carlisle 35, Dartmouth 10; Harvard 37, Brown 0; Michigan 13, Pennsylvania 0; Cornell 10, Lafayette 3; Colgate 35, Syracuse 13; Tufts 27, Bowdoin 7; Ohio State 13, Case 0; Navy 10, Penn State 0; Army 55, Villanova 0; Amherst 12, Williams 0; Northwestern 20, Indiana 21; Iowa 45, Ames 7; Chicago 13, Minnesota 7; Wesleyan 20, New York 0; Mississippi 21, Arkansas 10; Auburn 14, Vanderbilt 6; Harvard 15, Yale 5; Carlisle 35, Syracuse 27; Navy 48, New York 0; Lehigh 7, Lafayette 0; Trinity 14, Wesleyan 0; Chicago 19, Wisconsin 0; Minnesota 19, Illinois 9; Purdue 12, Indiana 7; Ohio State 58, Northwestern 0; Army 14, Springfield 7; Nebraska 12, Iowa 0; Missouri 3, Kansas 0; Worcester 7, Ohio 6; Cornell 21, Pennsylvania 0; Syracuse 75, St. Louis 0; Carlisle 13, Brown 0; Army 22, Navy 9.

Field and Track

H. P. DREW equalled the world's record for 130 yards when he won the event in 12 4-5 seconds in the annual games of the Catholic Young Men's Societies.

The New England Cross-Country Run was won by Maine with 40 points. Dartmouth second with 44.

Alfred J. Lill, Jr., of Boston, was elected president of the Amateur Athletic Union, and James E. Sullivan was re-elected secretary-treasurer.

Princeton defeated Yale in their annual cross-country run, 21 points to 34.

Pennsylvania won the cross-country run from Columbia, obtaining 17 points to the latter's 39.

Harvard, by a four-point margin, defeated Cornell in their cross-country run, the score being 51 for the former to 55 for the latter.

Hannes Kolehmainen won the ten-mile American Championship, covering the distance in 50 minutes 51 3-5 seconds, breaking the former record of 52 minutes 34 4-5 seconds made by G. Bonhag, and incidentally hanging up twenty-six intermediate amateur records.

Columbia lost to Princeton in their cross-country run, scoring 49 points to the latter's 15.

James Powers, of the Boston Athletic Association, lowered the Pacific Coast record for the mile when he covered the distance in 4 minutes 18 4-5 seconds; two seconds better than the former record held by Clyde, of the University of Washington.

By the score of 20 to 34 Cornell beat Pennsylvania in their annual cross-country run.

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Yale defeated Harvard, 25 to 33, in their annual cross-country run.

Indiana lost the annual cross-country run with Illinois by the score of 34 to 21.

Hannes Kolehmainen won the Metropolitan cross-country run, making a new record for the six miles of 33 minutes 30 3-5 seconds, 1 minute 15 2-5 seconds better than the previous best.

The Intercollegiate Cross-Country Run was won by Cornell with 68 points, the other colleges finishing: Harvard, 92; Massachusetts Institute of Technology, 103; Pennsylvania, 107; Princeton, 114; Dartmouth, 125; Brown, 143; Yale, 146; Syracuse, 224; Penn State, 236; Columbia, 333; Michigan, 335.

The cross-country meet of the "Big Nine" Conference resulted as follows: Wisconsin, 72; Illinois, 83; Ohio, 106; Ames, 109; Purdue, 117; Minnesota, 147; Indiana, 174; Northwestern, 176.

Miscellaneous

W. Hoppe retained the 18.2 balkline billiard championship by defeating C. Demarest, 500 to 294.

A. De Oro defeated J. Carney by the score of 150 to 143 for the three-cushion professional billiard championship.

Columbia and Princeton played to a 2-2 tie at soccer.

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THE TREND IN 1914 CARS AS INDICATED BY SEVERAL OF THE LEADERS

By HERBERT WHYTE

WITH the coming of each new year there is always a growing interest on the part of motorists as to what improvements or changes are being made by leading manufacturers in their product as planned for the season just dawning. Specific information along these lines, especially as related to the better companies, is of real value, too, not only because it shows what *they* are doing, and there is always general interest in that, but even more, perhaps, because they are the pacemakers and their methods and specifications are largely the standards by which others are gauged.

With a view, therefore, of giving the thousands of motorists who read OUTING an idea of what some of the standards for the 1914 season will be I present in the following, a brief résumé of some of the new points of interest in connection with several of the standard types of cars which are always of significance to the motoring public.

A Quality Product

Amongst producers of cars of the best type the name of the Pierce-Arrow Motor Car Company stands in the forefront. Its cars have always typified luxury and refinement to the last degree.

The present Pierce-Arrow models are the result of a long chain of conservative and painstaking experiments. It has never been this company's policy to make radical changes from one year to the next. Each forward step has been so carefully considered that it has seldom been found necessary to retract from any position, once assumed. Many of the basic elements of design in the earliest six-cylinder Pierce-Arrow models are still accepted as standard practice by the whole industry. Such changes as are made from year to year are generally simply in the nature of refinements. The Pierce-Arrow Motor Car Company has abandoned the principle of issuing yearly models. Minor improvements are incorporated in the current series without change in designation. More important changes occur at convenient points in the cycle of manufacture and new series numbers serve to designate the change. The present cars are designated as A-2, B-2 and C-2; 66 H.P., 48 H.P., and 38 H.P., respectively.

The following are the principal changes incorporated in the two series:

Electric engine starter instead of compressed air. Head lamps on front fenders instead of on brackets attached to the frame. Special Pierce-Arrow "Jiffy" storm curtains instead of the old type. Other changes are in the nature of refinements in fitting, material and minor details of design.

The change from the air starter to the electric type was made principally to secure uniformity of design and construction. The chief advantage is realized by the company, as it is of the opinion that, from the car user's point of view, there is nothing to choose between the Pierce-Arrow air starter and the Pierce-Arrow-Westinghouse electric device. The system uses a 6-volt current throughout, eliminating heavy multiple pole switches and allowing all the battery cells to be charged in series. The three-unit lighting, starting and ignition plan is followed, and a one-wire system of current circulation employed. The one-wire system cuts in half all liability to short circuit and current leaks, while the three units in the starting, lighting and ignition system operate absolutely independently one from the other.

The new position for the head lamps is most advantageous. The source of light being higher from the road than formerly, does not give rise to deceiving exaggerations of road inequalities. Being further apart, the lamps afford a much better illumination of ditches, curves and cross-roads. Approaching cars allow ample room in passing, as there are no projections extending beyond the lamps, as is the case when they are placed in the old position. This one element of insurance against "sideswipe" is sufficient to warrant the change without other consideration.

The new type of storm curtain is

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built in the Pierce-Arrow factory, under "shop rights" concessions purchased from the inventors. Owners of Pierce-Arrow cars are enabled to profit by the great convenience of these curtains without any sacrifice of the highest standards of workmanship and material.

Sixes Exclusively

As the pioneer manufacturer of sixes exclusively the Winton Motor Car Company has for years, ever since in June of 1907, it declared its policy of "sixes exclusively," held the center of popular interest to a very large extent.

For this year, in practically all of its real essentials the Winton six will remain a close duplicate to the 1913 car.

It will still retain as from the beginning 48 H.P. as the standard for its power plant and the same self-starting system which has been in continuous use on it now for seven years.

In its general lines, however, the new car is undoubtedly the most handsome this company has ever turned out. The stream-line body is particularly beautiful and satisfying in its effect. It is entirely free from any interruptions to its continuous, unspoiled symmetry in the way of side lamps, horn, door-handles, etc. From end to end it has the charm to the eye and mind of unusually well-balanced proportions.

Another change effected in the new car and which contributes materially to the strong appeal it makes in appearance is the lowered suspension of all parts above the axles.

The winning effect of thus getting the car "nearer to the ground" is apparent the very minute you see it, and makes it a car particularly free from any suggestion of "top heaviness"—a point quite as much in evidence when the top is up as when it is down and laid back at the rear.

Still another refinement is found in the left-hand drive permitting all seats to be reached from curb side, which change has also brought about center control.

Additional new features that motorists will want to know about and which make the 1914 Winton six distinctly the best Winton six ever turned out are lengthened piston stroke; clutch release increased; lengthened front springs; rear springs serving as radius rods; tire inflation and increased starting pressure supplied by Kellogg pump; primer from cowl to intake, and hot air tube to carburetor; cowl board carries speedometer, clock, coil, etc.; no side lamps; small auxiliary lamps in headlights serve instead; German silver radiator; nickeled metal parts.

Twenty Different Bodies

In the information obtainable regarding the Packard Motor Car Company's plans it is evident that complete as has been their appeal to discriminating motorists in the past, it will be even more advanced during 1914. No less than twenty body styles are offered in connection with the new Packard "2-38," ranging in price from $3,850 to $5,100, and so uniformly varied in character as to offer just the right body for every possible taste and requirement, in both open and closed carriages.

The new Packard "2-38" retains, however, the essential improvements which were embodied in the previous model, including left drive, left-hand gear shift and centralized control board. It is equipped with the silent worm bevel driving gears, a new mechanical feature never before manufactured.

It is built in two types of chassis, known as touring and phaeton.

A special touring body seating six is offered in addition to the standard Packard line. This enables a purchaser to enjoy the maximum service qualities of the Packard chassis at a lower cost than when fitted with a Packard standard touring body.

The enclosed body line includes both six and seven passenger bodies. The new six-passenger bodies fill the gap between the brougham and the limousine. The length and narrowness of the body, the low, sweeping roof line, the well-defined corners and the simplicity of exterior give the six-passenger enclosed bodies a very smart appearance.

The gear shift levers have been moved forward about eight inches, and two front doors offer access to the front compartment from either side except in enclosed bodies having cab sides. The position of the levers on the left side promotes the convenience of the driver and permits of carrying a third passenger in the front seat of all bodies having undivided front seats.

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The lined top on open bodies of Packard made can be raised or lowered by one man from the tonneau, or from a position outside the car. The door curtains, except the left front, open with the doors.

The motor is rated at 38 horsepower under the A. L. A. M. formula. At 1,800 R.P.M. it develops 60 horsepower.

By a concealed force-feed lubrication system, oil is carried under pressure to all motor bearings. An auxiliary system feeds oil directly to the cylinder walls, and is automatically regulated for different power requirements.

The cylinders are cast in blocks of three, and there is a separate exhaust system for each of the two units. This eliminates back pressure due to overlapping exhaust discharges.

The two-block motor, with enclosed wiring, valves and oil passages, presents an exceptionally neat appearance.

The Packard-Bijur electrical system is used for starting and lighting. It consists of a separate generator and a cranking motor, which spins the engine fast enough so that it may be started on the magneto. The ignition system, using Bosch duplex magneto, is entirely separate and distinct from the starting and lighting systems.

The wheelbase of the touring or phaeton chassis is 140 inches. Tires are 36 x 4½ inches front and 37 x 5 inches rear.

A Popular-Priced Car

In connection with cars of the more popular price, selling for around $1,000, specifications of the King car for 1914 will be of interest. One chassis is used, fitted with either touring or roadster body.

The motor is a standard four-cylinder L-head type of block construction, developing from 30-35 horsepower.

The Briggs dual system of ignition, with one set of spark plugs, is used, the magneto being placed upon the right side of the motor and driven by means of inclosed gears. On the left side of the power plant there is an oil pump driven by bevel gears from the camshaft, which forces the oil over the crankshaft bearings. The Thermo-Syphon radiator and Stromberg carbureter are used.

For $100 extra the Ward-Leonard electric cranking and lighting system will be installed.

The multiple-disc clutch is inclosed within an integral extension of the crankcase, and consists of six steel driving discs faced with Raybestos, which in turn are in contact with six driven discs of tempered steel, so arranged that the clutch is self-contained in a unit and no thrust is offered in any direction or on any parts exclusive of the spring pressure on the plates. When the clutch is released the spring pressure is taken on the gear-set case by a large ball bearing and is not applied to the crank-shaft or fly-wheel.

The gear-set affords three speeds forward and reverse, very wide-faced gears being used, and run on a shaft carried on Hyatt roller bearings.

Brakes are internal and external and consist of a service brake operating on 14-inch drums bolted to the rear wheels, and an emergency brake of the expanding type operating on a 2¼-inch surface within these drums. The steering gear is a Gemmer semi-irreversible worm and gear type, adjustable for wear.

The front springs are standard semi-elliptic type, and the cantilever type of spring, a modification of the Lanchester springs, is used in the rear.

The equipment, in addition to windshield, top, electric lights, demountable rims and tools, includes an electric horn and Stewart-Warner speedometer.

The "Pocket Edition" Automobile

As the "pocket edition" of the automobile the motorcycle combines with speed and endurance the added ability of taking your real outdoor enthusiast into the byways of ordinarily inaccessible country, and away from civilization if there be even so little of a road as but just the width of the tires to guide him.

Amongst the motorcycles of this country recognized as "setting the pace" in the matter of constructive strength, both as regards materials and manner of making and improvements and up-to-dateness that produced by the Iver Johnson's Arms and Cycle Works ranks with the leaders.

There are three or four points observed in the construction of this machine that those interested will want particularly to know about.

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The crank, for instance, is made in two parts, each of which has a crank-pin projection. One of these telescopes inside the other and is double bolted on the outside, the fly-wheels being bolted to the cranks.

This method of construction gives unusual strength and complete insurance against "spreading."

In the Iver Johnson "twin" motor, two crank-pins are employed, instead of one—the usual construction.

This method of construction also makes one piston end its power stroke at the instant the other piston is commencing its compression stroke. Perfect balance, absence of vibration, and exceptional control are thus obtained.

The bearings in the motor, too, have been given especial attention. They are made unusually long — almost large enough for the average automobile.

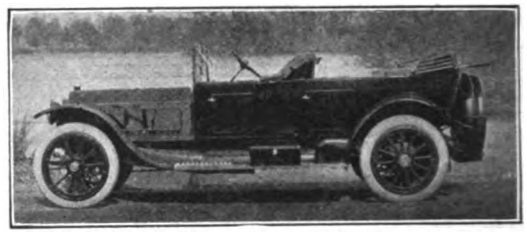
Over the softer metal of the crankshaft two hard-tempered steel sleeves are shrunk. They run in long bronze bushings, and to still further increase the bearing surface the fly-wheels are recessed to admit a corresponding lengthening of the bronze bushings. The crankshaft, therefore, virtually floats in oil its entire length, thus eliminating frictional wear.

In operating valves and driving the magneto simplicity is the keynote. Instead of having many parts to give possible trouble, in the Iver Johnson "single" *just one part,* a heavy glass hard forged camshaft, does both. This camshaft is geared to the end of the main shaft, and is keyed to the magneto. Ample tests have proved that it will not show the slightest wear during the life of the average motorcycle, and will not get out of adjustment.

In the "twin" there is equal if not greater simplicity and surety against trouble. All four cams are operated by one large one, which is internally geared to the main shaft. Its wide diameter gives an easy, rapid lift. The four valves are interchangeable.

A Splendid "48-Six"

Of the three Peerless sixes, "38-Six," "48-Six" and "60-Six," the "48-Six" is easily the leader of the line, its size and



The Peerless "48-Six" Touring Car.

power adapting it to the requirements of the greatest number of purchasers.

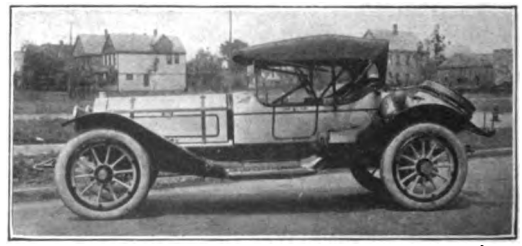
It is a car of remarkable beauty.

The bodies of the straight-line design are unusually spacious and handsome. The seats are very wide and deeply upholstered with the softest Turkish cushions. The exterior is made of sheet aluminum and very highly finished.

Besides all the usual equipment the car carries a self-contained electric lighting and starting system which operates throughout on a six-volt current. It is remarkably simple and trouble-proof. Shock absorbers are attached at both the front and rear axles. There is a power-driven tire pump, an electric horn, speedometer with clock, etc.

The Peerless Motor Car Company's reputation for painstaking workmanship and efficiency in design is more than maintained in all of its present models. Of late years this company has pioneered in the development of motor-car metallurgy, which has given it a unique position among makers in the matter of the selection and preparation of material.

Investigations have been carried on in



Special Peerless Roadster "60-Six"

its laboratory which have increased the world's knowledge of steel, its structure and possibilities, some materials being developed by heat treatment which were previously unknown. The weight of Peerless cars has been reduced, with strength and wearing qualities of important parts greatly increased, all of which has added thousands of miles of life to these cars.

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MADE BY A SPECIALIST

EVERY maker, we suppose, is producing the best car he knows how to build. Yet no two makes are alike, and no two makes are of equal value. Some one maker knows better than any other maker how to produce small, cheap cars. Some one maker knows better than any other maker how to produce superb electric cars. And Alexander Winton knows better than any other maker how to produce the world's finest six-cylinder car.

Specialists Lead the World

There's nothing accidental about it. It isn't luck or genius, but hard work, concentration, and experience. We live in an age of specialists. Specialists lead the world, and easily outdistance the straddlers, the floppers, the men who do not know their own minds well enough to stick to ***some one thing.***

Cars That Don't Make Good

It's so in every profession, every business, and especially in the complicated automobile business, where a single mistake can ruin a season's output. That's why some cars are up one year and down the next. Also, that's why so many makers are forced to announce sweeping changes from year to year.

How can you expect excellence in the car of any maker who switches and revises and discards his models so rapidly that he never has a chance to perfect any one of them? What sort of specialist is he? How can he hope to equal the Winton Six, which has been the ***sole*** product of the great Winton factory for seven consecutive years?

WINTON SIX

Long stroke motor, left drive, center control, electric lights, self-starter, finest mohair top, easily handled curtains, rain-vision glass front, best Warner speedometer, Waltham eight-day clock, Klaxon electric horn, rear tire carriers, four-cylinder tire pump, demountable rims, full set of tools, German silver radiator, metal parts nickel finished. Fully equipped, **$3250**

One Maker's Method

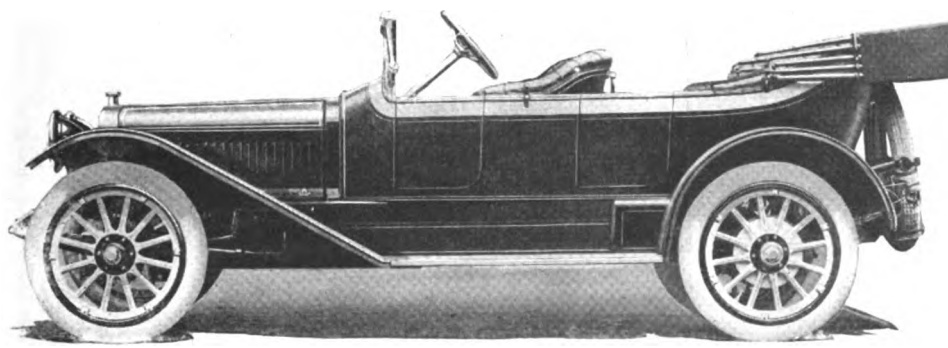
Mr. Winton never tried to make more cars than any other maker. He never tried to see how many different models he could make. He did not flop around from one thing to another, trying to monopolize the entire automobile market. But, on the contrary, for longer than seven years, he has devoted himself to a single object—the perfection of one six-cylinder car, the Winton Six.

The Result Is Excellence

That's what has made Alexander Winton the world's most experienced six-cylinder specialist, and the Winton Six the world's standard six-cylinder car. No wonder the Winton Six won high-grade demand away from four-cylinder cars. No wonder the Winton Six holds the world's lowest repair expense record. No wonder it is a car of exceptional beauty and of goodness that stays good. For it is the one car in the world that has been most thoroughly proved, developed, and perfected—the most satisfying car that money can buy.

The Winton Motor Car Company

109 Berea Road, Cleveland, Ohio



Our Book No. 48 tells automobile trade facts that you ought to know

CHARLES FRANCIS PRESS, NEW YORK

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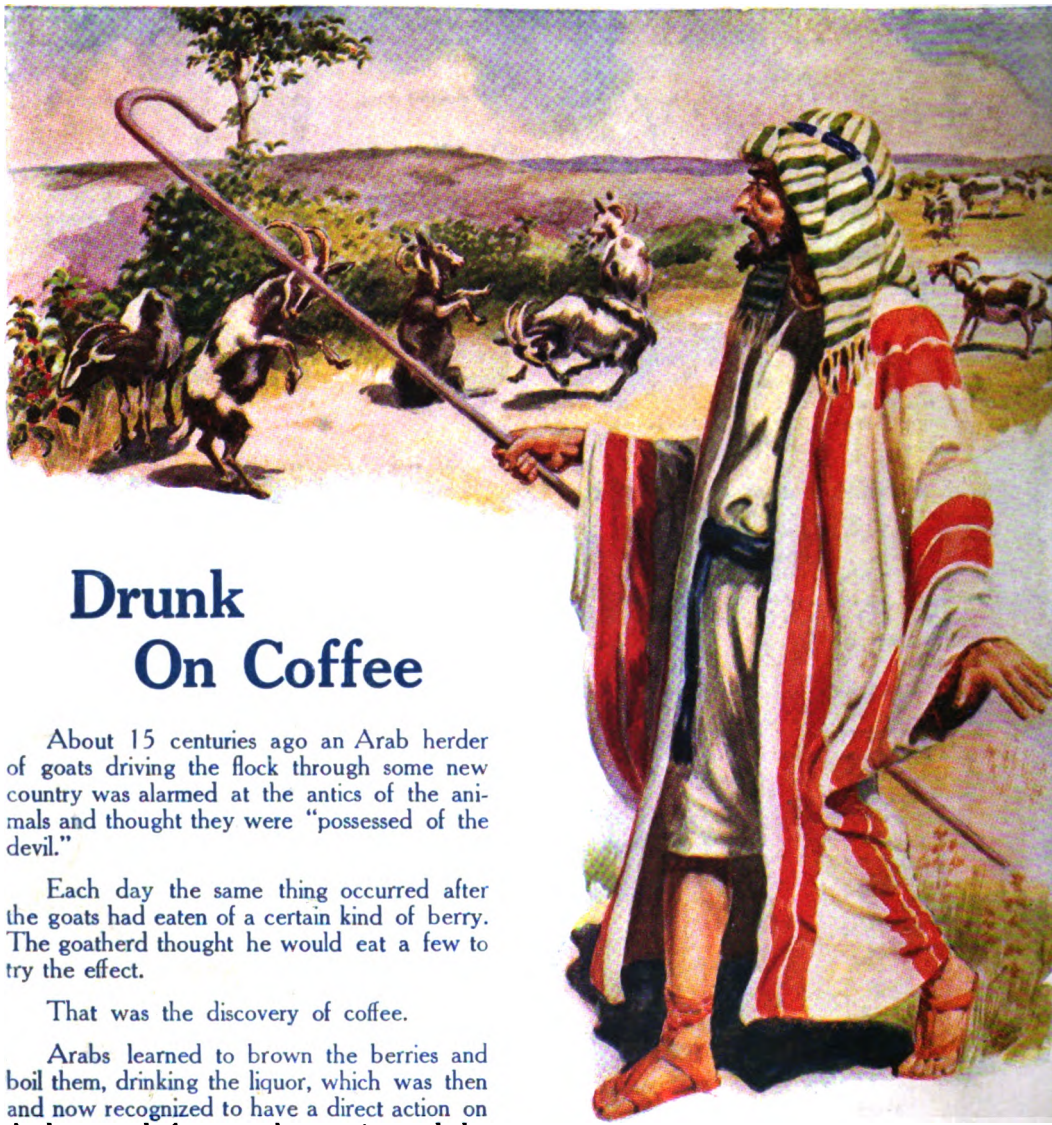

Drunk On Coffee

About 15 centuries ago an Arab herder of goats driving the flock through some new country was alarmed at the antics of the animals and thought they were "possessed of the devil."

Each day the same thing occurred after the goats had eaten of a certain kind of berry. The goatherd thought he would eat a few to try the effect.

That was the discovery of coffee.

Arabs learned to brown the berries and boil them, drinking the liquor, which was then and now recognized to have a direct action on the heart, and of course the reaction and depression later on.

Coffee sets up a partial congestion of the liver; dulls the brain; wrecks the nerves, and interferes with digestion.

Anyone can easily prove whether it be coffee that causes the periodical headaches, sick stomach, bowel troubles, weak heart, kidney complaint, weak eyes, neuralgia, rheumatism or nervous prostration.

Simply leave it off entirely for ten days and have a rich, piping hot cup of **Postum.**

If you find, in a day or two, that you are getting better, that's your cue, follow it straight back to health, comfort and the power to do things.

Postum now comes in two forms:

Regular Postum — must be well boiled.

Instant Postum is a soluble powder. A spoonful dissolves in a cup of hot water, and with sugar and cream makes a delicious beverage ***instantly.***

"There's a Reason" for POSTUM

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OUTING

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Forestry Cloth is the King of Fabrics for Outdoor Wear

Wind-defying and cold-repelling, it is warm, pliable and handsome. It tailors splendidly and makes graceful garments that breathe the very spirit of outdoor life. Stands hard usage and looks well through long wear. Soft gray-green; all weights up to 22 oz.

For golfing, riding and motoring clothes, **Olivauto Cloth** is ideal. Turns wind and showers. Fashionable olive brown in color. Medium weight only.

Forestry Cloth is stamped with name on the reverse of the cloth like this:

FORESTRY CLOTH

Olivauto Cloth is stamped like this:

OLIVAUTO CLOTH

Look for these marks. It is your means of identifying the genuine.

Any custom tailor can obtain **Forestry Cloth** or **Olivauto Cloth** for you. They may be had also in correct sporting garments, ready-to-wear, from Abercrombie & Fitch Co., Russell Uniform Co., New York, and other outfitters. If you have difficulty in finding, write for samples.

Mackinaw Fabrics made by the American Woolen Company are dependable in quality. They include every plaid and desirable pattern as well as plain colors. The best mackinaws obtainable at all prices are made from American Woolen Company Fabrics.

American Woolen Company Blankets are made to meet all the requirements of camp life.

American Woolen Company

Wm. M. Wood, President.

Selling Agency **American Woolen Co. of New York**
18th to 19th St. on 4th Ave., New York City

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ESPECIALLY IN WINTER

When the cares of earth oppress you,
When the ills of life distress you,
When futilities impress you,
Walk it off!

When the future's grave and graver,
When the past has lost its savor,
When the present finds no favor,
Walk it off!

That's the sport that legs were made for,
That's the purpose roads were laid for,
Well or ill, in debt or paid for,
Walk it off.

—THOMAS TINKER.

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DUCKS EVERYWHERE, FLUSHING FROM EVERY MARSHY POOL

From a photograph by Herbert K. Job. Illustration for "In Quest of the Canvasback."

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OUTING

FEBRUARY
1914

Vol. LXIII No. 5

IN QUEST OF THE CANVASBACK

By HERBERT K. JOB

Illustrated with Photographs by the Author

SLOWLY we are solving the problem of game bird propagation. The mallard and the quail, the ruffed grouse and the black duck yield themselves with fair readiness to hand-rearing. The canvasback, that favorite of the epicure, is a harder problem. Many have said that that shy bird would never flourish in captivity or come to maturity within the narrow confines of coop or breeding pen. Last summer Mr. Job made a long journey to Lake Winnepegosis to test the soundness of this belief. He succeeded so far as the initial stages were concerned. He found the eggs, hatched the young birds, and brought them back in safety. It remains for the future to show how captivity will affect them ultimately.

MANY a man has gone hunting for canvasbacks, elusive and almost vanishing wild fowl, and has found only hunting. Before we started out on our five-thousand-mile jaunt we made pretty certain that there would be something besides hunting.

A year before the writer had made a beginning at a rather novel sort of pursuit. With the co-operation of the United States Government and of the Canadian authorities I was enabled to undertake experiments in the propagation of native American wild fowl. Encamped at Lake Manitoba, northwest Canada, we gathered and hatched out eggs of ten species of wild ducks, raised a large proportion of the young, and brought back about one hundred of them for breeding stock in experiments which are now under way. We were late in getting located, and unfortunately the canvasbacks, which are early breeders, had all hatched. This species was the most interesting and important of all, and it has never been known to breed in captivity. We were allowed to try it again this year, especially with a view to securing young canvasbacks and of studying other species. The question was where to conduct the hunt. The prime requisite was to find a canvasback breeding country. Where there were canvasbacks there could hardly fail to be also other kinds of ducks.

It was well we began inquiries the au-

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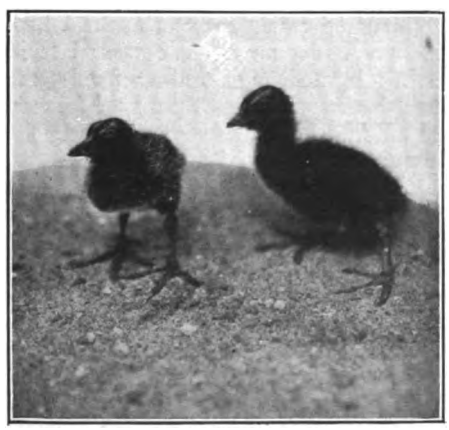
YOUNG MALLARD

YOUNG SHOVELLER OR SPOONBILL



YOUNG AMERICAN COOTS OR MUD-HENS

tumn before, because we barely got satisfactory information before it was nearly time to start. It was to be Lake Winnipegosis, in the unsurveyed wilderness of northern Manitoba. Even thus we had to go partly on faith, for during the long period while the ice is softening the few isolated inhabitants up the lake have no communication with the outside world. From all accounts, though, it was a typical breeding resort of the canvasback, where for miles tall canes and rushes grow out of the water in the interminable marsh and muskeg—a paradise for such as like that sort of thing.

We made it a Government expedition, a party of four. A. C. Bent, the ornithologist, was one member, representing the Smithsonian Institution, securing material for the Government work on "Life Histories of North American Birds." Assisting him was F. S. Hersey, of Taunton, Mass. My assistant was my son, G. Curtiss Job, senior in Yale University, who took part in the previous expedition.

The twenty-ninth of May found us at the terminus of the railroad, a typical forlorn little Western town. Out yonder was something more to the point, the great sparkling Lake Winnipegosis, stretching away like an ocean, some 140 miles to the north, teeming with interest and adventure. It did not take us long to find a man who had a good able schooner with plenty of room to take us up the lake. Into it we dumped an astonishing amount of stuff, including incubators, brooders, photographic outfits, duck feed, and so on. We set sail on this breezy adventure with no exact destination in view but to size up the country and camp in some convenient place, preferably near some human being.

Evening found us far off in the solitudes. A border of marsh about a mile wide extended along the lake shore, back of which was the unbroken, unsurveyed wilderness of poplar forest, with an occasional bunch of spruce raising dark, pointed spires above the paler green of the opening poplar foliage. Spring had only recently come, for the ice in the lake had disappeared only the week before. The fresh breeze that had sent us flying and plunging had quieted to a

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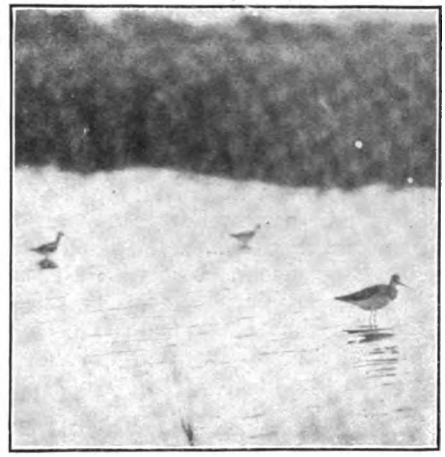
mere breath, and the treacherous lake had suddenly changed from rolling hills to a mirror. The first sign that we had observed of human occupancy lay before us, a white-washed log-house just back from the shore, belonging to a French family, the only white settlers in that whole region. The place looked neat and attractive, lighted up by the feeble rays of the setting sun. The location was a sort of knoll or island in the great marsh, poplar and willow groves on each side, respectively, backed by the strip of marsh and then the poplar forest. There were several buildings, some stables, and a huge wood-pile, the latter especially a sign of thrift.

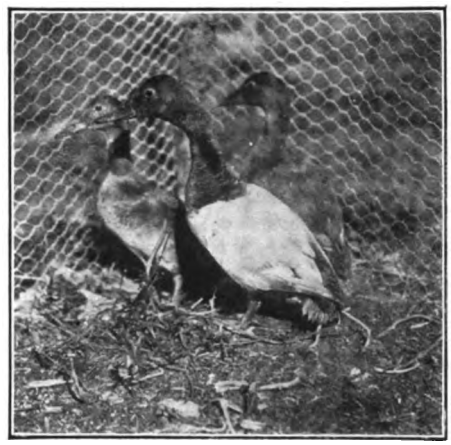
Other things being equal, we preferred to live with whites rather than Indians, so we stopped to prospect. Driving off the band of savage dogs, we located the owner in the barnyard, an elderly Frenchman, fairly bubbling over with humor and good-nature. "Why, yes! Delighted!" And so forth. We found that next day his son and family were to move to town, vacating a three-room log cabin on the premises, just what we wanted. Supper was ready, of a sort that convinced us that the mistress, with her appetizing French cooking, would make vast improvement on our happy-go-lucky camp provender. We surrendered then and there, and next day found us duly installed.

That first morning we were up with the birds and out to see them. Two minutes' walk from camp we had to pull up our long wading-boots. Immediately we were in the haunts of the ducks, and in next to no time we were seeing canvasbacks, redheads, ruddies, golden-eyes, mallards, teal, and various other water-birds, particularly the black tern, which was everywhere, and proved to be the most abundant bird of the region. Back in the woods we found a great migration of warblers and many other small birds in progress. Moose droppings were scattered all about, as though it were a moose barnyard. Ruffed grouse were drumming incessantly in various directions. Indeed, there was so much to see that it was hard work to stop for breakfast.

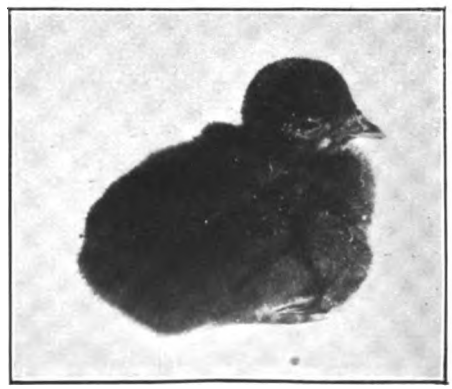
We soon discovered that the nests of



YELLOWLEGS IN POOL



AN ADULT CANVASBACK AND TWO YOUNG



YOUNG LOON

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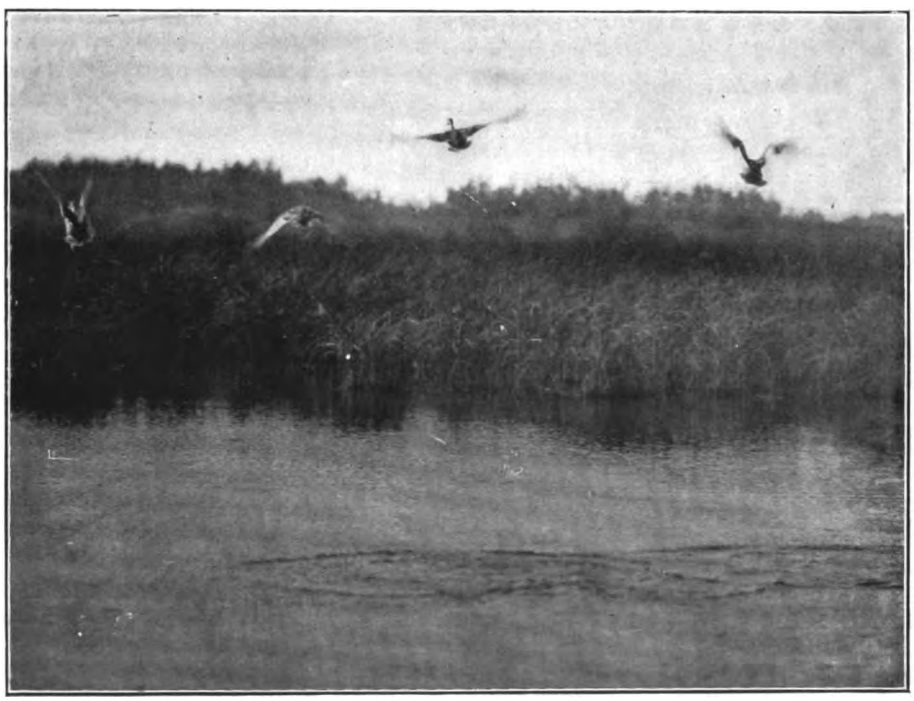
the ducks were exceedingly hard to find, scattered over so vast an area. There were, however, certain especially favorable localities within reach by boat, where the ducks were rather more congested in numbers. One was a few miles farther up the lake, at the entrance of a river which flowed out to another lake at that point. Fortunately for us an unmarried son who was staying there had a large gasoline boat with a cabin, suitable for cruising. We made arrangement with him to take us to various localities of interest. Next day we made with him our first determined hunt for ducks' nests, in the marshes at the river entrance. Where we first started in was a forest of tall canes growing out of quite deep water. The marshes were still yellow and brown, as the new growth had not yet appeared. Here we met a large colony of the singular loon-like Western grebe. Their nests were soggy piles of dead stems, hidden among the dense growth.

Finding that progress in this maze of canes, in water too deep to wade, was very slow, we crossed the river to where it was more of an open meadowy country, with firmer footing. With us was Joseph, a young Frenchman who worked for our host, strong and active, a great hunter. The rest of us landed to hunt the meadow, while Joseph preferred to push the canoe through areas of cat-tails. Striking off for myself, I beat through grass and patches of weeds. Then I came to a small, dry elevation or island in the marsh, overgrown with long grass, weeds, and some low bushes, a typical place, thought I, for a duck's nest. Right I was. A big duck suddenly fluttered from beneath a rose bush, right at my feet. First I made sure of the species, a mallard. Then I found myself on my knees, gloating over the first duck's nest of the trip, a fine set of ten eggs. My friends found another mallard's nest with eight eggs, in a layer of drift-wood out in the meadow, washed up by some storm.

Taking our eggs back to the boat, we found that Joseph had discovered a canvasback's nest out in the water among the cat-tails, containing seven eggs, two of which had been laid by a redhead. It



DUCKS FLUSHING FROM SMALL SLOUGH

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WILD DUCKS SPRINGING FROM A POOL IN THE MARSH

is quite common for ducks of similar species to lay in each other's nests. Our "chasseur intrepid," as we nicknamed him, much to his gratification, had also found a number of nests of the American coot or mudhen, and of Holboell's, horned, and pied-billed grebes. Besides the ducks' eggs I also took some of the coots', being minded to try to raise some of these quaint birds. I wrapped the eggs warmly in woolen cloth and put them in a pail, surrounded by a rubber cloth. That evening when I transferred them to the incubator they were still warm.

Another locality that was a notable breeding-ground of ducks was across the arm of the lake from us and farther up, a region of alkali marsh and shallow pools. A family of half-breeds lived there, and next day one of them, a young man, came over to our camp in a small boat. Already it was nearly hatching time for the canvasbacks, and we were anxious to find nests at once. The youth thought that he and his family could help us, and said that they would try.

Next day, June 2, we explored a part of this marsh on our own hook. It proved a wonderful place for bird-life. In and around the muddy pools were many flocks of shore-birds, still migrating North—sandpipers, plovers, turnstones, yellowlegs, phalaropes, and others—about which I could write pages. One of the most interesting shore-birds was a single Hudsonian godwit, a rare bird these days. Ducks also dotted the ponds, either in pairs or parties of males whose mates were incubating *somewhere* —how I wished I knew definitely! There were pintails, mallards, shovellers, lesser scaups or broadbills, green-winged and blue-winged teal in fair numbers. I saw also several gadwalls or gray ducks, and one beautiful male baldpate or American widgeon. The ducks of the canvasback type prefer the deeper reedy sloughs.

Here and there on the marsh were small wooded islands or "bluffs," covered with poplar, oak, or spruce. On one of these we noticed a hollow stub, and found in it, down almost to the ground, seven large green eggs of the American golden-eye or whistler, a most interesting duck which I desired particularly to study. A few rods farther on was another low stub with eight eggs of this species, and in another bluff, a mile farther, we found another set of seven. On our return we learned that Joseph had found us ten more golden-eyes' eggs, in a stub at the edge of the poplar forest back of camp. It was cer-

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YOUNG GOLDEN-EYE, NEARLY FLEDGED, SHOWING LAST TRACE OF THE WHITE DOWNY PATCH ON FACE

tainly "golden-eye day." We did not find any more ducks' nests this time, though once I thought I had. Suddenly a large bird jumped from the grass right between my feet, and went springing and running away through the grass and weeds. It proved to be a sharp-tailed grouse or prairie chicken and a nest with thirteen eggs.

Two days later, as we returned late at night from a long, interesting boat trip away up the lake, we learned that the half-breeds had sent over word that they had found a number of canvasback nests, and that some of the eggs were nearly hatched, so we had better come right away. The weather next day was threatening, but we dared not wait. Landing on the marsh, our guide first took me to a pintail's nest, eight eggs, on a little "island" in the marsh, just back from the edge. At this time the wind suddenly backed from southeast to northeast, piping up harder every minute, and starting into rain. In half an hour it was blowing a gale and raining hard, the worst possible conditions for gathering eggs. However, I thought we had better try to carry the thing through, now we were out there.

We had hard work getting aboard the power-boat by the canoe without capsizing, but we made it, and ran up the lake a couple of miles farther and into the entrance of a small creek, opposite a rounded bluff of poplar which marked the most wonderful canvasback breeding-ground I had ever seen. I was almost in a daze of bewilderment and excitement as the two guides took us from nest to nest. Two were redheads', built out over deep water among the last year's cat-tails and rushes, where these had been broken down by the snow. They contained nine and fourteen eggs. The large set, I found later, were laid by two birds, as five of the eggs hatched a week after the rest. One other nest was a mallard's, but all the rest were canvasbacks'.

In every case the female canvasback was sheltering her eggs from the rain. Usually they flew directly off when we were ten or twelve paces away. At the third nest the duck stuck to her task. The splendid creature lay flat on the nest, with neck extended toward us, snake-like. Her peculiar bill, tapering to a point, and her dark eyes, conspicuous amid the lighter brown plumage of the head, gave her a singularly weird appearance. She flew with great reluctance when we were very close. No wonder her ten eggs were all pipped. Every one of them hatched that night in the incubator, the first of our afterwards numerous family.

The nesting location chosen by these canvasbacks was peculiar. Instead of being, as is more usual, placed in clumps of reeds or rushes or areas of these out in the lake or slough, in every case but one those now examined were built back

YOUNG CANVASBACKS

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from small, shallow pools in the marsh, from one to five yards from the edge, in continuous areas of a peculiar sedge. It was last season's growth, only about waist-high, in shallow water and on firm bottom, distinguished by a three-cornered stem. The nest was a mound of dead stems of the sedge, built up almost tower-like, in some cases over a foot above the water. The sedge all around in a circle was pulled up or trampled down, leaving the nest in a little open pond several feet wide, without anything to conceal it, for it was visible from some little distance as one waded about. The one exception was a nest of this type, built in an area of broken-down cat-tails. The eggs we took were quickly wrapped and put under waterproof in a pail, as before.

When we had made the rounds, the last part in a canoe to a redhead's nest, the wind was so violent that we were unable to force the canoe back to the power-boat. They, too, were hardly able to drive out of the creek against the gale, but finally they came around to meet us. When we finally got aboard the captain declared it would be impossible to land at camp on account of the surf. I made such a fuss about spoiling those priceless eggs that he consented to try. We had an exciting run to leeward, down those miles of white, turbulent water. Near camp we found a slight projection of reeds and marsh that made enough of a shelter to get ashore. I was relieved to find the eggs still warm when I put them into the machine. That

YOUNG GADWALL

YOUNG LESSER SCAUP OR BLUEBILL

they were not injured was shown by the outcome, for within ten days nearly every one had hatched.

Meanwhile a place had to be provided for the raising of our increasing family. The dogs had killed all the poultry our hosts had tried to keep. So we cut posts in the woods, and, with a roll of wire fencing, we built a fine large pen on the only dry and level spot of land which was available, right in front of our cabin. The ducklings hatched splendidly and did well, and before long our capacity was taxed. The yard was laid out like a little city. We had four brooders in a row, each with its own yard. Beyond these yards was "Broadway." Then came two square pens, occupying the width of the four brooders, and beyond these were two more of the same size, eight divisions in all. Each of the four larger sections had a coop made out of a large packing-case.

When the ducks in the brooders got to be about six weeks old, and were getting quite a bit feathered, we graduated them to the box coops. In the end we had over two hundred young ducks, divided about equally, averaging about twenty-five to a pen. At first we sometimes had to keep fifty or sixty in a brooder till some new ones arrived, but found this undesirable. The smaller ones got trampled and kept away from the food, and some would get killed or

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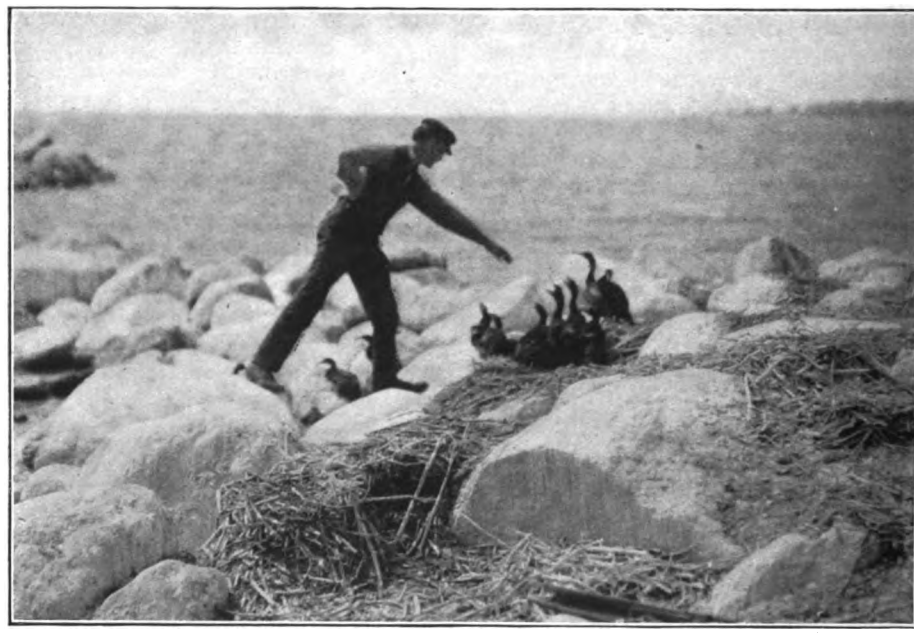
become stunted in growth. We had to use incubators, for want of hens to sit.

The hatch, to be sure, was splendid, averaging for the season the same exactly as the year before—92 per cent. Nevertheless, the ideal way would be with bantams, so that each brood could have the care of a mother, and range around with her, instead of having to be shut up in a small yard, which soon became foul. We had no chance here to change ground, and later there was some loss, when the ducklings were half grown, from the "going light" trouble, which in this case was evidently caused by foul ground. By bringing in fresh sand from time to time we minimized the difficulty.

The rearing was much the same as in our work the year before. This time, however, I was delighted to have a splendid lot of young canvasbacks. These thrived on the same food as the other ducklings. Later they seemed rather more susceptible to trouble from fouled ground than the other species. The little canvasbacks at first are covered with a yellowish down, with darker olive blotches on the upper parts. The yellow rapidly fades as they grow older. They closely resemble the young redheads. The olive of the back, however, is slightly darker, and the shape of the bill is different, but less so at first. One has to look sharp to distinguish these species.

By nature the young canvasback is peculiarly shy. They are quite tame at first if handled gently, but become shyer as they grow older. The redhead, though so similar, seems to be a tamer bird than the other. Usually they eat readily out of one's hand, while the canvasback seldom does. With the canvasback a fright seems to have lasting effect. A batch of twenty-four at one time were frightened by some quick motions of the attendant and never got over it. Any sudden approach would send them racing and trampling one another in senseless panic. They are awkward birds on land, their legs being set far "aft." Probably they need access to water earlier than most kinds. We could not pen them, however, on the lake shore, owing to the great changes in level during storms.



FEEDING THE YOUNG CORMORANTS ON THE SHORE OF LAKE WINNIPEGOSIS

Young ducks need green food, and it

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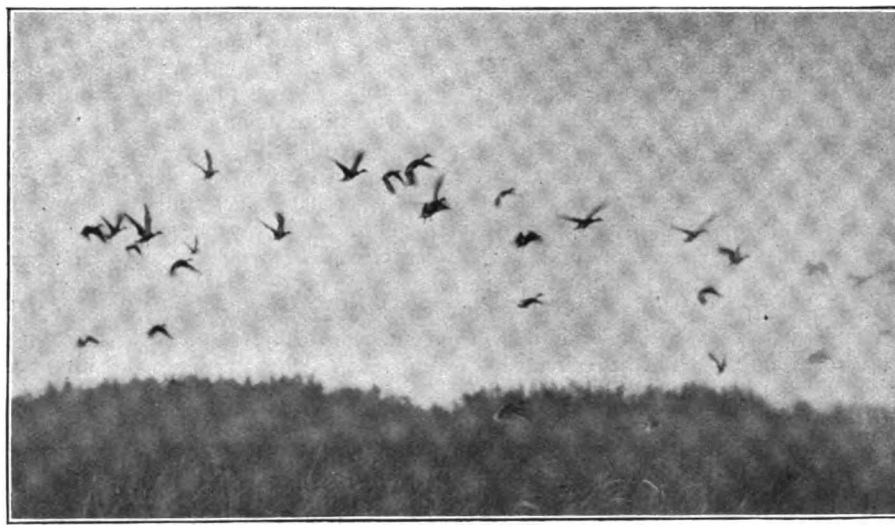
was hard to provide this in sufficient quantity, till one day the assistant, in a trip across the lake, discovered a large concourse of ducks in an area of water-plants growing up from the bottom of the lake. This proved to be wild celery, on which the ducks were feeding. He brought back a boat-load of it, and the ducklings, though they had never seen any, pitched into it with the greatest eagerness. Hereafter they had it one feed every day, or had it by them in pans of water.

I noticed this, too, that the canvasback, in common with the other allied species like the redhead and scaup, are slower in feathering than the ordinary ducks. The pintail, for instance, shows feathers on the sides at three weeks, and is able to fly at ten to eleven weeks. The canvasback shows no trace of feathering under four weeks, and even at twelve weeks the flight feathers are still immature.

After we had been out there about a month we were able to hire a small open gasoline boat for the rest of the season. We all learned to run it, and had exciting times scouring around that squally lake, with some pretty close calls. I knew precious little about machinery, and when I ran it off alone a dozen miles farther into the wilds I never felt thoroughly confident that I could surely get back. I always managed to somehow, though at times belated. It is no fun alone in a wilderness fussing with a balky engine out on a turbulent lake in a squall!

When the nesting season was over, by the middle of July at the latest, and the broods of young ducks were about in the grass and swimming in the sloughs, a new sporting era dawned. It was now the game to catch the sly little skulkers. If anyone thinks it easy, I should enjoy seeing him try! As soon as they catch sight of an intruder the brood puts for the tangle of weeds and grass. All kinds can dive like witches, and some can tire out the strongest man even out in the open water. It is hard to do much alone. One day I was lucky enough to catch by myself five young gadwalls. The best way, I found, was to get the half-breeds across the lake to organize a hunt with me.

When we saw a brood in the slough every man of us raced for them, go-as-you-please. Into the slough we would plunge, waist to breast deep, being dressed for it. If the youngsters dove we tried to grab them as they swam past us under water. If they took to the grass we tried to seize them before they hid, or else hunt them out as they



DUCKS JUMPING FROM THE GRASS

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skulked, sometimes under water in the tangle, all but their bills. It had to be quick work; to hesitate for a second was to be lost.

The best sport of all was to chase young canvasbacks with the power-boat out on the lake. With a party of half-breeds or Indians aboard and two canoes in tow, I would run along the shore, just outside the weeds. If we succeeded in heading a brood out into open water, the Indians took to their canoes. Each of the three parties would then select a young duck and follow it up. The chase was nearly hopeless save on perfectly calm days, which were few and far between. For thirty to sixty minutes the pursued would try all sorts of aquatic tricks—swim, skitter, dive, or skulk with bill only out of water. When tired it would make for the weeds, and it took keen and vigorous work to head it off. If all ruses failed, and the canvasback finally began to get winded, its appearances would become more and more frequent, and at last it would sit resignedly on the water and allow itself to be picked up. For my part of the chase I would keep the power-boat circling about the elusive creature till one of the canoes came to my assistance.

One day I was watching four Indians in two canoes chase a nearly full-grown young canvasback. After nearly an hour's pursuit the bird made for shore, but would not land, as there were no weeds. The canoes closed in on it just off the pebbly beach. Every time it came up they shouted to scare it and grabbed for it, sometimes pitching it out of water with their paddles, as the water was shallow, almost upsetting the canoes in their excitement. I was excited, too, and stood up in the stern as I circled about, and yelled encouragement. Finally an Indian seized the canvasback, and I had a splendid bird to add to the stock. In a few days it was as tame as the rest.

Three whole months we spent, profitably and pleasantly, out there in the wilderness studying birds and wild fowl. We had a little world all to ourselves, except when some roving Indians landed to look at the ducks, reminding us that there were others. We nicknamed the place "the Garden of Eden." At last most of the young ducks were full grown. The latest species to breed was the scaup, and even these little dark-colored puff-balls were over a month old and were getting feathers.

We had a thriving family of full two hundred, comprising the following eleven species: Canvasback, redhead, lesser scaup or bluebill, American golden-eye or whistler, pintail, mallard, shoveller or spoonbill, gadwall or gray duck, green-winged and blue-winged teal, and American coot or mudhen. All did well except the golden-eye, which proved to be a peculiar species, yet very interesting. The young are black and white, closely resembling in many ways the young scoters which we tried to rear the preceding season. They required a special diet, and week after week would hardly grow perceptibly, till they became mere runts. We raised three to full plumage, but even these finally succumbed after reaching home.

Back to the World

One calm evening, the 24th of August, we loaded twelve crates with 200 ducks aboard the large power-boat, bade affectionate farewells to our kind friends, and were off. I shall never forget the tumult of my emotions as that familiar, lonely shore faded away in the deepening twilight. We were returning to a larger life, but leaving, I could not but know, a great gap in the lives of these worthy, lonely pioneers of the vast Canadian wilderness. Late that night, under brilliant moonlight, we glided into civilization. It was well we had taken advantage of the calm spell between the frequent autumnal gales, for in the morning the treacherous lake was again lumpy with its breaking swells.

Loading the crates of ducks into the express car, we were soon off on the long journey of nearly five days' continuous travel. The assistant and I fed and watered the ducks and tried to keep them dry and clean—a hard proposition. We roughed it in a colonist car and ate five-minute lunches, our train having no other facilities. Part of the way the ducks had for company a consignment

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of foxes for a fur farm. Ducks and foxes eyed and smelled one another across the aisle—tantalizing, truly, for the latter. The sights, sounds, and smells of that car worried the unfortunate express agent and astonished the natives as we passed through.

All things come to an end, and at last, thank Heaven, I landed my numerous children, all but ten, safely at their destination in Connecticut. They are good ducks, if I do say so, docile and obedient, willing to be experimented upon. Anyhow, I cannot help feeling fatherly toward them. I hope they may duly multiply and help to replenish the earth in our eastern districts so woefully lacking in these splendid wild fowl.

IF YOU HAVE TIME THIS IS THE BEST WAY TO BUILD A COOKING FIRE OUT OF DOORS WHEN COLD WEATHER CALLS FOR ECONOMY OF HEAT

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BOYHOOD WAR

By WALTER PRICHARD EATON

DRAWING BY WALTER KING STONE AND PHILLIPPS WARD

I USED to wonder as a boy if baseball did not really originate in the sport of snow-balling — not as a small boy, perhaps, but after the period of self-consciousness had been reached. It seemed almost certain that it had, when I watched the ludicrous efforts at ball throwing of some Italian youngsters who had immigrated to our town. It came quite naturally for us to throw a baseball into another boy's mit, because all our lives we had been throwing snow-balls at his head! The Italians had never thrown snow-balls —ergo, they had never invented baseball. It couldn't be a national game in a snowless land—Q. E. D. To be sure, I was not then familiar with the uncanny skill of the youngsters in County Mayo, throwing rocks. But, if I had been, I should doubtless have triumphantly retorted by pointing out that Patrick O'Brien was the best player on our team.

Yet even now I cannot escape the belief that there is a dim connection between snow-balling and the national game, even if Ty Cobb does hail from Georgia. You make your snow missile the size of a baseball, or the shape. The accuracy and speed of your delivery determines your effectiveness. The peculiar technique, the correlation of muscles, the judgment of range, which are required of the baseball player are developed by snow-balling, and, moreover, they were developed in America long before baseball was invented. Were we not taught that they were put to practical and patriotic use by the boys of Boston during the occupation of the city by General Gage? Baseball was surely due as a game in a snow-balling nation.

Snow-balling was never practised by us, however, as a conscious means of keeping in condition for spring. It was practised as a means of putting the sixth-grade boys out of commission, if possible. Before the snow came, we fought up and down the village street with horse chestnuts, till somebody broke a store window and we had to run. After the snow came we fought at close range, with more merciful weapons, and individual accomplishments stood out. For instance, Pat O'Brien could easily "stand" any five sixth-grade kids, because his sizzling and uncannily accurate delivery, using balls squeezed almost to ice, couldn't be closed in upon. Buck Gray, on the other hand, was not in the least dangerous as a thrower, but he didn't mind being hit, so his method was to close in with a rush, head down, grab an opponent, hurl him down, and wash his face with snow. Buck was destined for football, obviously, and he fulfilled his destiny, becoming in after years a famous guard.

When the battles were over, one's hands were usually encased in very wet mittens, and when these soggy coverings were removed, they disclosed parboiled fingers, covered with bits of red wool lint. Often there was snow down one's collar and up one's sleeves, melting uncomfortably. You went home with your dearest enemy, uttered a last taunt and took a last shot at him, and he at you, as you parted at your gate, and then sneaked in the back way to hide your mittens behind the stove to dry, before their condition was detected. It was odd how subdued we brave warriors a'ways became, inside the domestic portals!

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AFTER THE SNOW CAME WE FOUGHT AT CLOSE RANGE, ... AND INDIVIDUAL ACCOMPLISHMENTS STOOD OUT

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ALL BUT OVER!

IN WHITE WATER

By EDWARD BRECK

ILLUSTRATED WITH PHOTOGRAPHS BY THE AUTHOR

DO you thing you are a real canoeman? Wait till you have tried running rapids. There's the acid test of your skill and nerve. The canoe can do it, but can you? Can you approximate the art of your Indian guide in white water? If you can, you are in a small and very select class of white men who have sounded the depths of the canoe's ability—and also of its tricks and whims. No one can tell you all about it on paper, but Dr. Breck can come as near it as anyone. If you will read his article you will at least not approach the task enveloped in the dangerous courage of ignorance.

NO doubt rushing through the luminiferous ether in a racing monoplane, especially if you have got to the loop-the-loop stage of mastership, is exciting business, and there is no gainsaying the blood-heating qualities of a race for the Vanderbilt Cup in a big many-horsepower car, or negotiating the Cresta Run on that aristocratic descendant of the old New England clipper-sled, the skeleton bob, or even trying to outdistance the Empire State Express in a Hudson River ice-yacht. All these sports appeal strongly to the lover of strenuous joys, and each of them has its special charms. But for the woodsman, especially if he possess not the wealth of the Indies, there is another pastime nearer to hand, which has its thrills and its opportunities for the enjoyment both of natural beauties and of healthful exercise, namely, that of running rapids in a canoe, enjoyed for the most part in the wild woods far from the haunts of man.

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WITH THE PADDLE ALONE

And the canoe itself, the most graceful craft that swims! How all other vehicles, whether made for air, land, or water, appear heavy and clumsy beside it. It is to the American Indian that we owe it, that remarkable savage who was living in the Stone Age when the first European, whoever he may have been, set foot upon this continent. What a craftsman, within his necessarily narrow limits he was, and how well he adapted his homes, his clothing, his weapons, and his water-craft to his needs. He was a real man, take him for all in all, before our ancestors civilized him, carrying the Bible in one hand and a jug of firewater in the other.

In the olden days nearly every tribe of Indians had its own model of canoe, ranging from those of the Western peoples, with enormous turned-up prows, to the nearly flat Algonquin shape with scarcely a rise at the bow. And in size they varied greatly, too,—from the great *canôte de maître* adopted by the commercial companies, a huge, clumsy affair often paddled by as many as sixteen men, and so heavy that portages were nearly impossible—to the light and frail little craft of the Yukon Indian, in which he could not stand erect without great danger of capsizing, and which he propelled up-stream with a short stick in each hand, sitting flat on the bottom of the canoe. The big craft was the last development before the wooden boat, while the Yukon eggshell seems to have been the missing link between the real canoe and the Eskimo kyak.

Most aboriginal canoes were made of bark, though there were many of wood. In the East birchbark was the favorite material, on account of its plenty and the ease with which it could be obtained and worked.

The white man was not able to improve on the general model of the Indian's canoe, but he has taught him how to make it stronger and smoother, and since the time when, somewhere about 1850, Gerrish, of Maine, began to sell canoes made on the Indian model, and much like the original in construction, with cedar sheathing and ash and spruce ribs and other parts, but covered with toughened and painted canvas instead of bark, the so-called canvas-covered canoe has been the accepted model among woodsmen of the North Woods. Birchbark canoes are still used to a limited extent, but, except that they are lighter when quite new, and are therefore easy to handle in certain ways, they compare very unfavorably with a good canvas, which is stronger, stiffer, easier to paddle, being smoother, far more durable, and

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easier to repair than the birch. It is also made on more graceful lines, though the birch must always possess a charm of wild originality that the more sophisticated craft can never claim.

The general public has set the danger-signal flying over the whole fleet of canoes and fastened an odium upon them very difficult to erase; and perhaps this is just as well, though we all know that, properly handled, a canoe is a pretty safe boat. A good deal, however, lies in that phrase "properly handled," and there is no doubt that no creature in the world, animate or inanimate, so quickly resents and punishes ill-treatment as a North-Woods canoe. A man who knows how to sit in her and handle her can go a lifetime without accident, that is, if he is not "looking for trouble," as we are going to do later on; but let him "get gay" in the slightest manner, either by wrong handling or by violating some common law of physics, and before you can say "Jack Robinson!" you are overboard! And even then a canoe is strangely human. The late angling authority, H. P. Wells (delightful writer!), thus describes an overset canoe:

"It passes from the demureness of a cat into the friskiness of a kitten. Touch it and it sidles off like a country girl at a merry-making when some gallant tries to put his arm around her waist. It does not squeal, it is true, but it acts just as skittishly as if it did. Of all the floating constructions of man, to none is the application of the feminine pronoun more appropriate."

Mr. Wells, too, points out the comparative safety of a canoe, though he drolly and wisely remarks, "The canoe is pretty steady, even allowing a careful man to stand and cast his fly. But it is no place for a Græco-Roman wrestling-match!"

On the whole I can recommend the rule I have laid down for my own daughters, who are all good swimmers and good "canoemen": "Never take anybody into your canoe who cannot swim."

A good deal has been written about the making of canoes with seats, or, as in the Indian craft, without any. Of course, there can be no doubt that the seatless canoe is safer, for it means that its crew must sit nearer the bottom, and the lower the center of gravity, the harder it is to capsize the craft. But, except in very rough water or in a blow, or in both,

LOU HARLOW AT THE END OF HIS STROKE

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A SLIGHT JAR

seats have their legitimate place. It is all a matter of judgment and of need.

The stern seat of the average modern canoe is not far from right, though it might be placed an inch or two lower. The usual front seat is several inches too high, though this very height makes casting the fly or paddling much easier for the average amateur. If there is anything more annoying than trying to cast or to paddle while squatted upon one of those Maine canoe-chairs, I hope I shall never meet with it. Furthermore, the canoe-seat in no manner prevents the paddler from kneeling down to his heart's content. In fact, the seat then acts as a kind of brace to the back or the buttocks, as the paddler may elect.

The question of a keel is an open one. On the one hand a keel (usually only an inch in depth and 2 to 3½ broad) makes the canoe a little harder to turn quickly, a disadvantage in running rapids; while, on the other hand, it makes it much stiffer and stronger, and takes many hard bumps that might put the canoe out of commission. Most canoes meant for hard usage, and running rapids is hard usage, indeed, are now furnished with keels.

As to the paddle, the rule is broad blades for lake work, narrow for streams, especially where poles are not used. The Indians and old canoemen of the extreme East use very short paddles, usually of oak or ash, sometimes maple, and of the last-named wood are made most of the best paddles. In any case yours should be of some hard wood if you mean to handle your canoe in white water, for it must stand many grievous strains, where a spruce could not be relied on. The modern amateur rule of length is: "Just as long as you are tall," but it is a question of personal choice and habit. Most canoemen prefer a somewhat shorter paddle, and, since the usual position of a man negotiating rapids is on his knees, which means that he is nearer the water than while seated higher, it follows that a long paddle is not necessary. If no poles are to be used, a longer paddle has its advantages.

A canoe of any size will run any river, but for all practical purposes the limits may be placed at from fifteen to twenty feet. In Maine eighteen feet is the favorite length for one sportsman and his guide. On the New Brunswick salmon rivers bigger canoes, often of wood, are sometimes used, for two men with poles are necessary to hold them in place for the angler. In my part of Nova Scotia (the western), the usual length is six-

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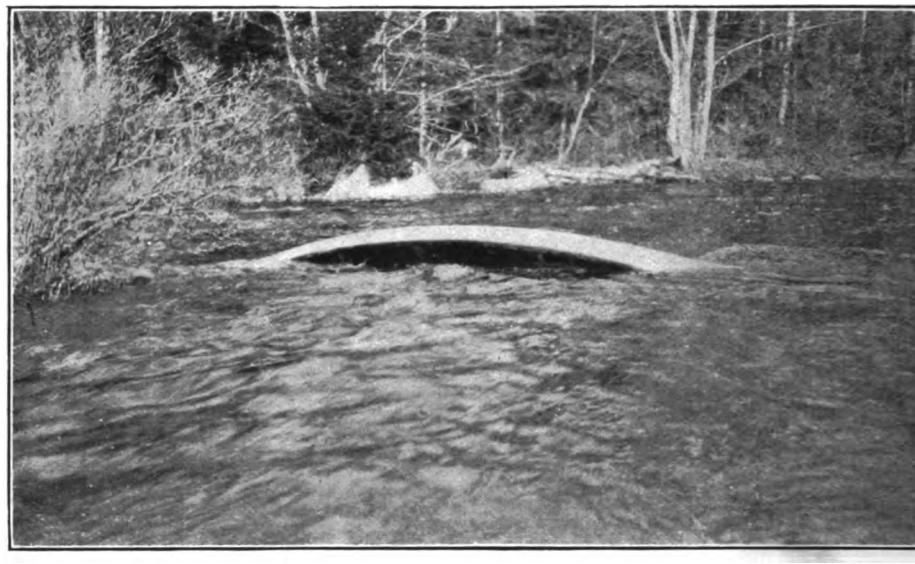
teen feet, which we find big enough to go anywhere a canoe should go. And we always have fixed or unfixed seats in it, though we paddle a good deal in the kneeling position.

It is curious how authorities will differ about all things connected with the woods. Mr. Perry D. Frazer speaks of a sixteen-footer as a one-man canoe, while Mr. Dugmore says that one of the same size will carry three persons and a fairly heavy outfit. It will indeed carry three persons without difficulty, but if they are to remain out for, say, ten days in all kinds of weather, I fear they would be somewhat cramped by the duffle and provisions needed for that time. In any case the ideal crew is two men, whether for a trouting trip, or just for running nasty rapids. Of course, "singles" in rapid-running are events of themselves.

You can drive any model of canoe against a swift current, but the straighter the bottom the more it will bear, and the less easily it will be turned aside. A canoe with a pronounced curve in its bottom from stem to stern is harder to keep into the eye of the current, as it spins round too easily.

In quiet water a canoe should be about on an even keel, or with the bow slightly higher than the stern. If it is empty a single paddler may sit on the forward seat, or on the bottom where that seat is situated, looking and paddling, of course, toward what is generally the stern. But a better purchase on the water can be obtained from a position nearer the end of the canoe, and therefore it is better to take the usual stern place, and put a rock or some other weight in the bow sufficiently heavy to bring down the bow to its proper level. Is there anything funnier than to see a tenderfoot try to paddle an empty canoe against a strong wind, with no weight in the bow?



DOWN AND UNDER

In quick water, however, it is a different matter, and the bow must be higher out of water going up-stream, and the stern a little higher than the bow running down-stream. Up-stream it is a matter of easy, quick, and accurate aiming of the bow, and, of course, the more lightly weighted end of anything is more easily pointed than the heavier. By the same token the heavier end goes down faster, swept along by the current, and keeps its course better. Therefore, in down-stream work, it is a matter of keeping the canoe in the channel by holding back the stern until the bow points aright.

I recall an amusing case of the neglect of the laws of physics on the part of one

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of our best guides in his younger years. We had come to a rather nasty but quite short fall, and, as the canoes were quite heavily laden with duffle, the sportsmen walked round the place while the guides ran the canoes down the fall. Three of them shifted their loads forward, but our young giant, rejoicing in his strength, "rushed in where angels, etc." It happened that his man was a heavyweight, and his absence sent the bow of the canoe well into the air. With confidence Hod swung out and pointed his craft into the current, which, concentrating in a kind of natural sluice between high rocks, raced at breakneck pace for thirty yards, and then poured itself into a lovely pool at the bottom. There was no chance in such a powerful current to use a pole, and there were no dangerous rocks in the middle channel, so paddles were used.

Now, at the top of the sluice, just where the water gathers headway, there is a small rock hardly six inches above the water, and Hod got his bow caught on it. No doubt for a moment this did not alarm him, but the arresting of the bow, even for a second, was enough to enable the eager current to grasp the heavy stern and swing it round in spite of all the canoeman could do; and the next moment he was in that most dreaded of all positions in quick water, with his canoe broadside to the stream! With a wonderfully agile scramble Hod threw himself from his seat on to the rock, and gave his canoe a jerk that caused the stern to swing free of the rock in the very nick of time to avoid a fill, and Hod, evidently believing that he could turn his craft in the current, jumped in once more and proceeded to match his strength with that of the Maitland River.

He jammed down his paddle behind the rock with the intention of holding the stern until the canoe was again bow-on to the stream. But the power of over three hundred pounds of man and duffle acted upon by a tremendous stream of water, plus the factor of a slippery paddle, simply tore the canoe from the rock, and the next moment it was spinning about like a top, while Hod strove desperately to keep the heavy stern back, an impossible task. He might have let the stern go and thus driven wildly, but perhaps safely down the fall, using his paddle as a rudder, but no man likes to negotiate such water backwards, and there was precious little time to think. The next moment fate decided the matter, for, as the canoe was sucked into the narrowest and fastest part of the fall, one end of the wavering canoe struck a rock on the shore, and the next moment we saw a confusion of arms, legs, duffle, and

COMING DOWN TOBEATIC SLUICE—A "STUNT"

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canoe being poured down that water-funnel and over the dump into the pool!

We watched the catastrophe with hearts in our mouths, for, at the pace he was being swept down-stream, the contact of Hod's head, or even a limb, with a rock would have been very serious indeed. Fortunately, however, he went over the fall and swam ashore, safe and sound, except for a severe blow to his dignity and a feeling of humiliation. The canoe was badly broken up, and Hod's sportsman lost his best rod and his .22 rifle, plus a few less valuable possessions. All the eldest guide said was, "That'll la'rn yer not to monkey with the buzz-saw, an' not to try runnin' the Sluice Fall with your bow up in the air."

Of the two implements, pole and paddle, the latter is the "sporty" one, while the pole is frankly utilitarian, being employed for the most part to hold a canoe in a swift stream for the purpose of fishing, or to get up and down places too difficult for the paddle. One spring I took Pat Lacy, a celebrated and excellent moose and bear hunter, along with me on a fishing trip over a lot of swift water made more difficult by an unusual freshet, and it speedily appeared that Pat was more at home with the paddle than the pole, which he affected to despise. The result was that, when we came to some choice place where trout were known to lie, and where he could have checked the canoe with ease had he been an expert with the pole, Pat would strain and puff in his efforts to hold the craft in the strong current. And in spite of everything the canoe would slowly but surely drift down-stream right over the place where I wanted to drop my fly, until at last, with a spasmodic "Up-pup-pup-pup! I got to let 'er go now, Doctor!" Pat would give up and let the canoe rush down the current.

POLING UP, JUST RETRIEVING

Swift water with the paddle is nearly always negotiated down-stream, unless the water is fairly free from rocks, in which case a moderate current can be overcome, though it is hard work and not much sport. Down-stream it is extremely interesting and exciting, for there will come many moments when the checking of the canoe, a matter of ease with a pole, cannot be done, and then it is a case of good steering and a strong faith in Providence. A little bit of good luck doesn't come amiss, either. I shall never forget running the Freeman rapid, a fast and angry and rock-filled fifty yards of foam, with Lou Harlow, one of our best Indian canoemen. It is not over-dangerous under ordinary circum-

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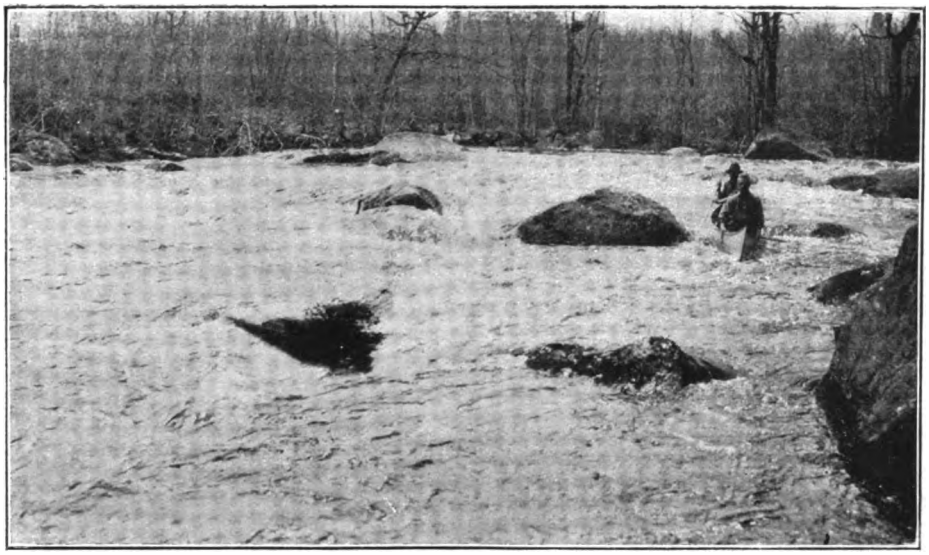

"PICKING YOUR WAY"

stances, but has a bad elbow near the bottom that can only be rounded, using only paddles, by the employment of considerable muscle as well as skill.

We were well on our swift downward way when, above the roar of the stream, I heard Lou yelling something I could not understand, but I noticed that the canoe seemed to be following its own sweet will more than usually, and I saw that we were apparently about to go straight on to a bad rock to starboard unless something was done. As a rule the bowman "sits tight" and does little unless called upon by the steerer, and this rock was easy to avoid by the latter. To my surprise, nothing was done, and. at the very last instant, I jabbed my paddle down into the foam and succeeded in giving the canoe just enough of a lateral push to avoid anything more than a scrape; but in doing so I had got my

HOD, GETTING A LONG STROKE

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CHARLES THE STRONG, AT THE MIDDLE OF HIS STROKE

blade so fixed between two rocks that, in order to avoid being capsized, I had to let go of the paddle altogether.

Turning to sing out to Lou, I saw that he, too, had lost his paddle, and we had the somewhat hair-raising exhilaration of being swept down the boisterous Freeman Run without paddle or pole. There was that awful elbow at the bottom, that seemed to be somehow trying to get at us, and I wondered just how big a hole it was going to stave in my favorite canoe, and in what general direction I should fly after the impact. With an impulse born of desperation I thrust out my foot over the bow as we came smack up against the rock, and surely all the luck was with us, for neither a sprained leg nor a very badly torn canoe resulted, whereas almost anything might have happened.

There are some things that must be learned by even the strongest of paddlers before he can be good in white water, the first being the ability to diagnose the character of the water right in front as well as that farther on, so that the best channel may be chosen. As in so many other fields, experience is here the best teacher, and only the very practised eye can detect the sure signs of the dangerous rocks that often lie at some distance beneath the surface; those slight but significant disturbances of the surfaces just above submerged rocks, and the roundness of the "healthy" curls at the edge of a fall. There are also the general character of the river to note, the banks hollowed out at an abrupt curve, that usually mean deep water, the slight openings in "eel-weirs" that allow a canoe to pass even in very shallow water, and the false channels that fool one into the necessity of working back up-stream for a hundred yards or more.

Then there is the still more difficult art of judging the force of the stream at a given point, and of knowing just how long, to the fraction of a second, it will take for a swinging canoe to reach a certain passage between two rocks, or the brink of a fall over which there is but one safe road. All that is going downstream, while the ascent of a river has its difficulties also, and they are not all matters of muscle.

The position of a single man in a canoe running down-stream with paddle only is generally a little aft of amidships, though, if it is loaded, he may kneel further to the rear, or even at the stern-seat. With a pole the same is true, except that he is hardly ever in the extreme stern, unless, as in my picture, "Getting a Long Stroke," he has stepped back over the rear thwart and has thrown himself

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SNUBBING HER AGAINST THE CURRENT

down on the pole, in order to "climb" it and so get a very long shove, only necessary, of course, in working up-stream.

In general a loaded canoe is easier to handle, as it is steadier, and the novice is recommended to practise with a good deal of ballast in his craft.

Down-stream and up-stream technique differ, especially when poling. With the paddle it is next to impossible to check a canoe in really swift water, and it becomes really a matter of steering. After that it is like Pat's "Up-pup-pup! Got to let 'er go now!"

Running with the paddle is purely poetic romance; poling is pretty nearly an exact science. Mark the good canoeman starting up-stream with partially loaded canoe, swinging his ten-foot seasoned pole shod with iron shell or ring-and-pike, and driving it hard into the bottom once or twice until the feel tells of a solid hold. Woe to him if the hold gives way suddenly; I have seen a man turn a lightning somersault into the foam for lack of this precaution. The stab is on either side of the canoe, according to the water and the man's habit, and a little in front of him if the canoe already has headway. He lets the pole run through his hands until it has come back to him, when, being sure of the solidity of the hold, he throws his weight on the wood, direction being given, if necessary, by lateral pressure, though, as the canoe has been "aimed" before the stroke, this pressure is more or less unconscious. There is no formula for any stroke in poling, nor for any hold or manipulation of the pole; for the whole thing is simply a matter of balance and the handling that comes easiest to one. The one indispensable thing is never to lose control.

Up-stream the canoe must be kept steadily into the current. The chief difficulty is pushing up an extra-hard pitch, say where a strong current is parted by a rock, dividing it into two small cataracts. Having chosen what seems to be the better climb, the canoe is pushed straight toward that side of the rock on which you wish to ascend, the bow and stern direction being exactly the same as the current. At the moment the bow of the canoe passes the edge of the rock it will naturally tend to swing on to the rock, since you are careful not to let it swing outward and risk being turned side-on. In the proper position the bow will very likely even touch the rock, though very gently. This is all right, for it prevents the bow being turned down-stream, and gives a safe purchase for the poler. He can even let the canoe hang there for a moment if necessary. Then, when he has braced for the next stroke he swings

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the bow a little more into the current above the rock, and another powerful heave sends the canoe out of danger.

At such moments a bow-paddler, if there is one, can make or unmake a good job of poling. The novice, fancying that things are going wrong because the canoe threatens to hit the rock, is apt to give a smart push with his paddle away from it, and the result of thus suddenly upsetting the rather careful and narrow calculations of the poler can easily be disastrous. A bowman of discretion and experience can be of great assistance, for a stroke here and there, just at the right time and of the proper kind, aids the poler to keep direction and saves him some hard work. The tenderfoot, however, had best sit tight and move not, whatever happens, until called upon.

Paine, in his "Tent Dwellers," thus describes the guides' skill in rough water: "How they managed just to evade a sharp point of rock on one side and by a quick twist escape shipwreck from a boulder or mass of boulders on the other, I fail to comprehend. Then there were narrow, boiling channels, so full of obstructions that I did not believe a chip could go through with entire safety. Yet somehow Del the Scout and Charles the Strong seemed to know, though they had never traveled this water before, just where it would let the canoes pass, just where the stones were wide enough to let us through—touching on both sides sometimes, and ominously scraping on the bottom, but sliding and teetering into the cauldron below, where somehow we did not perish, perhaps because we shot so quickly through the foam.

RUNNING KEMPTON FALLS STANDING UP

"In the beginning I remembered a few brief and appropriate prayers, from a childhood where such things were a staff of comfort, and so made my peace with the world each time before we took the desperate plunge. But as nothing seemed to happen—nothing fatal, I mean—I presently gave myself up to the pure enjoyment of the tumult and exhilaration, without disturbing myself as to dangers here or hereafter. I do not believe that the times that the guides got out of the canoes to ease them over hard places would exceed twice, and not oftener than that were we called on to assist them with the paddles. . . . I suppose that, in such a place, one's unskilled efforts are likely to be misdirected with fatal results."

Just so, but I can't seem to find in the book any description of a certain mo-

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ment's misdirected, or misapplied, effort on the part of one Paine on that very Shelburne trip, which sufficiently illustrated the danger of over-help on the part of the bowman. It occurred, if I remember aright, just as we were getting to our evening's camp. As Del was pushing the nose of Paine's canoe up past a certain rock in a very rough place, he had got a good purchase for his pole and was "lying down to it" with all his weight, when Paine, seeing the threatening rock fast approaching, suddenly leaned out over the gunwale with a view to fending off. Like a flash the inevitable result of two heavy men lurching to the same side of a canoe eventuated, and crew and duffle were floundering in the drink!

Poling down-stream is in some ways easier, but it has its difficulties. A novice should look out, for until he has acquired the instinct for judging the force and rapidity of the current, he is too apt to miscalculate, and, instead of swinging his bow over a ticklish place at the given moment, he will find that he is just a fatal bit too late; his bow is caught, and, unless he is to spill, he must "snub" his craft back out of danger. Snubbing, which means checking the canoe in rapid water, is the soul of poling down-stream. You see that the channel you must pass through is twenty yards below, but ten or more to port. It is not enough to steer the canoe in that direction, for the distance is so short that, if the water has any rapidity, you have no time to work sideways. You therefore jab the pole down on the right side, hold fast, thus checking the canoe's headway, and then push her toward the right and perhaps a little back up-river, working her thus until you are in a position to run straight down through the chosen opening.

Often it is necessary to work clear across a rather wide river, and this, in a strong current, is no easy task. At such times a good bowman can assist the poler materially, either paddling or holding the bow for a second while the poler gets a new purchase. The down-stream work of a first-class guide is wonderful. With apparent ease he can hold a canoe in the midst of a roaring, foaming rapid, while his sportsman casts his fly hither and thither at his leisure.

But, to repeat, the true sport is running down a nasty piece of river with the paddle only, and it calls for all the strength, agility, quickness of thought and resolution, as well as pluck, that the average forest-lover possesses.

There is no keener joy for the strenuous sportsman than to dash down a half-mile of broken rapids with a dump at the end, especially if he is not familiar with the water, a supposition that is not to be recommended. To see the water boil all around you and the spray and waves, too, come aboard, to barely miss the point of a black rock by an ace with your heart in your mouth, and go on careering down through the mad waters, picking your way as well as you can, but all the time more or less at the mercy of the angry stream—I know of no better fun in this world!

A ROUGH AND READY GAME BAG

EVER get caught out in the woods about 'steen miles from camp with the bleeding remains of a head-shot partridge at your feet and the alternative of lugging it by hand through the brush to the practical destruction of the corpse and the total ruination of all subsequent snap-shots or packing it in the bosom of your shirt before you? In which case roll your eye around for a rotten birch stub. Break off a hunk, shake out the débris of decay, and shave your bird into the resultant bark cylinder. You can plug the ends with strips of bark and have a neat parcel to shove up under the back breadth of your wamus to the region of your shoulder-blades. Then tuck the tail of that garment back to statu-quo and resume your route with both hands free and gun at the "ready."

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TAKING CARE OF THE SHOTGUN

By EDWARD C. CROSSMAN

How to Lessen the Wear and Tear That May Soon Rack Even a Good Gun Loose

THE smoothbore gun is at once the easiest of all arms to care for and the most neglected. The smooth barrels, free from the complication of rifling and fired with powders of very low pressure and easily removed residue, offer no excuse for poor condition. Also, unless the double gun is used with the heaviest of traploads, and that constantly, there is no excuse for any good arm getting loose, the bugaboo of the double barrel.

Double guns do get loose, and small blame to them for that. Rarely do they shoot loose, but it is easier to put the blame on the shooting than to accept it yourself, although it is with you that the fault usually lies.

It is more truthful and less comforting to say that double guns grind and pry loose, and that three-fourths of the guns that get loose do so because of the faults of omission and commission of their users.

A double gun is pivoted in its middle section, to allow the barrels to open or "bascule." Said barrels turn on a hardened pin running through the end of the frame. A half circle cut in the lower lug or lump of the barrels fits this pin. This half circle is kept snugly up against the hinge pin by the fore end, which wedges in between a small lug on the barrels, termed a loop, and the end of the frame. Some fore ends go on with spring pressure, tending still more to force forward the barrels against this hinge pin.

The entire shock of explosion in most American guns falls on the soft steel in this lug bearing against the hard hinge pin. The sole bearing surface in the lug is a little half circle cut out of the steel, and usually around ⅜-inch each way.

When the gun is fired, the barrels try to move forward with the shot, the frame tries to back away under the thrust of the heads of the shells. The crux of the argument falls upon the steel of the lug against which the hinge pin bears. Not infrequently this upsets a bit under the battering, and the instant it does the gun is actually loose, that is the breech ends of the barrels are not flush against the standing breech. They have moved forward an amount equal to the upset or battering of the steel in the lug.

In some rotary bolted guns, the bolt still snugs down the barrels, and there is not the slightest movement apparent, but still the gun is loose so far as fit goes. In one American gun, and practically all those of foreign breed, there is a second lug called the recoil hook or radial lug that swings down behind a shoulder in the frame and helps to absorb some of the thrust of recoil.

This upset, and a slight tendency to whip the barrels loose in a lateral direction, is all that shooting can do to a gun. In some guns, not using tapered or compensating bolts, the bolts and their bearings wear a trifle, and a slight play comes in between the barrels and the frame, but this is not precisely a state of looseness. The barrels and frame fit as snugly as before, and there remains but to make the bolts fit tightly once more to make the gun tight. In this case it is only the fastenings that have worn a bit, not the lug.

Now let's see what is chargeable to the account of Sir Gunner, and how much of the trouble he can avoid.

The working of the barrels under the strain of cocking the hammers, extracting the cases, and cocking the ejector hammers, to say nothing of the pressure of a spring type of fore end, makes the hinge

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FIGURE 1

Showing a double gun in the opened position. A—Bolting surfaces in the extension rib and lower lump; D—The recoil hook used to absorb thrust and to steady the barrels against lateral movement. Heavy lubricant should be used at A, and on Figure No. 2 at B, C, and D, wherever friction or bearing surfaces occur.

of a shotgun practically a bit of "heavy-duty" machinery. There is constant and heavy friction in the hinge. Obviously the wise man owning a piece of any other mechanism of the sort lubricates it when he asks it to work—but not the shotgun owner.

Sometimes he anoints the joint with a dab of an oily rag. Sometimes he goes to the trouble of removing the grit of a dusty trip therefrom before he uses the gun. Most of the time even these precautions are forgotten.

Having thus carefully prepared the gun for the strain he proceeds further with his care.

A double gun is in effect a lever about thirty inches long, with the hinge for a fulcrum, and then about three inches for a bite. This being the mechanical aspect of the case, the user proceeds to open it by placing the left hand a foot or so out the barrels, unlocking the bolts, and then slamming the barrels violently downward. Eventually they stop, a full stop against a suffering hinge with the momentum of a pair of long barrels, and the pressure of the hand to consider.

Then the gun is closed in nine cases out of ten without thought to the top lever, and the bolts it controls. It is just naturally slammed shut. This is called handling it smartly, when there is nothing smart about it. The powerful top lever spring drives home the bolts with all the force behind it, and their momentum into the bargain. If they are tapered they take up all the taper they possibly can, wearing a bit farther in each time this happens. Often, too, the gun is hard to unbolt for the next loading, owing to a slight wedging that may take place in the slamming process.

Another powerful argument for slamming a gun shut is that it may possibly jar a striker or hammer out of bent, and the gun be discharged. This is always possible with light pulls, with gritty, gummed locks that have needed cleaning for a cow's age, and with ordinary lock mechanism, devoid of the intercepting sears with which fine guns are fitted to guard against such catastrophes. Never mind about the safety, and the fact that it is usually at "safe" when the gun is opened and closed. A safety bolts the triggers so they cannot be pulled—and does no more. A gun still can jar off because the sears are not locked, or the strikers themselves are not blocked as they should be.

These things, and not shooting, are usually responsible for loose and for broken guns.

Now the remedy.

When you use that gun, see to it that the crescent in the lower lug, and the hinge pin in the frame carry no grit. In a dusty country the grit that gathers in a gun is scandalous.

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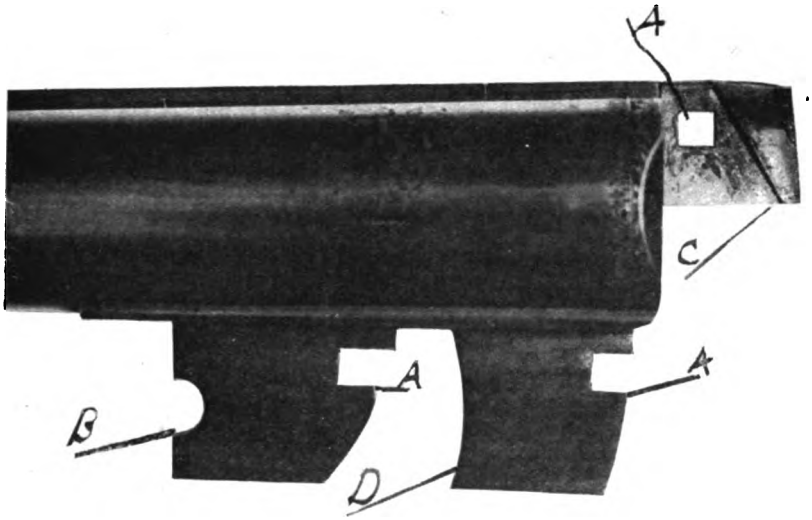

FIGURE 2

The bolting mechanism of the foreign type. A—Bolting surfaces in lower lumps and extension rib; B—Front circle; C—Dollshead extension rib, used to take up thrust between barrels and frame; D—Recoil hook, used for same purpose.

Then with pure vaseline, or, still better, with a good automobile grease, coat the hinge pin, the front circle in the lug which bears on the pin, the front of the frame against which the fore-end iron bears, the sides of the lugs that fit in the frame, the bolting surfaces in the lower lugs or in the extension rib as the gun may be built, and put a bit on the water-table or the flats of the barrels that lie down on the forward part of the frame.

Work the gun a dozen times to drive out the surplus grease, and wipe this off. Then note how differently the gun works. It seems cushioned, velvety instead of gritty and stiff working. You've taken off all friction from wearing surfaces, and you've actually cushioned the shock of recoil in some parts. Wipe the gun clean and recoat it each time you take it out, if it is worth taking care of, and it is, if it is worth owning at all.

Then, when you open it, open it like a white man. Don't slam it. Ejectors take a bit of time to work properly, not a great deal of time, but still some. They'll work more infallibly and be less likely to break if you open the gun smoothly and softly. When you close it hold the top lever over with your thumb and ease it home.

This does not mean to handle the gun like a crippled man, or as though it were made of glass. It takes no more time, and you can handle it as quickly and smoothly as the fellow that slams it around as he would a crowbar. Try it a few times and see if it cuts down your speed. It won't cut down your gun, on this you can bank.

The proper way to open a double gun is to put the stock below the right elbow, and then make the left hand do the work, dropping the barrels with the wrist as much as possible. There is one make of gun that almost justifies the user in putting the barrels below a fence rail and prying down on the stock to open it. With the elbow over the stock even this formidable weapon becomes somewhat easy.

The gun should be closed softly, and closed by bringing the stock up to the barrels, not the barrels up to the stock. Then, if a striker does jar off from incomplete cocking, dirt in the notch, or breakage, the charge will go into the dirt, not out somewhere in front of you.

Guard the muzzles of the shotgun. They are more exposed and delicate than a rifle muzzle, and a burr is more costly. An American factory made some tests along this line and found that a burr at the muzzle could cut down the pattern

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sometimes twenty per cent. or a fifth. We are not interested in the theory thereof; the fact is sufficient.

By far the best cleaning rod I have seen is the sort with expanding head, controlled by a lever at the handle. It follows the chamber, the smaller barrel, and then will pass into the choke itself, all with the same rag and with the same pressure if you do your part with said lever.

To remove lead, after wiping out the dry residue with a dry rag, swabbing with an oiled patch, and wiping dry again, cover the brass gauze fingers of this rod with No. 0 steel wool, using a fragment, say an inch and a half or two inches square, and covering up the gauze entirely. With the expanding rod the pressure can be controlled and lead removed more quickly than with the patented lead removers. The steel wool, or the patent lead remover, should be guarded jealously against foreign particles, grit, etc. A bit of grit on a patent cleaner can put a scratch down a whole barrel that to your horrified gaze looks as wide as a double-track railroad.

A shotgun is easily cleaned and kept in shape with any of the standard oils or nitro-cleaners. I prefer the latter. Only recollect that when using an oil of any sort or a nitro-cleaning preparation, the barrel is to be left coated with it, not left dry. Any nitro-cleaner is a most efficient rust preventive. It is wise not to apply heavy gun grease and set the gun away for any time until after a second doping with nitro-cleaner to make sure that the steel is chemically clean. It is the first pit, the first neglect, that makes all the trouble in a shotgun. Therefore don't let there be any first time.

"Twenty Years in the Big League" is the title of Clark Griffith's story of his own base-ball career which will appear in OUTING this spring. It is a tale of games and players, of actual experiences and observations from the standpoint of a man who has been described as "a pitcher with a ten cent arm and a $10,000 head."

BREAD THAT WEARS WELL

SOMETHING "durable" in the bread line, something which will wear well in the pocket and feel substantial between the jaws is always in demand where a "base camp" is the center of daily hunts or hikes. A quart of white flour, half a teaspoonful of salt, two teaspoonfuls of baking powder, two to three tablespoonfuls of molasses, and from one to two teaspoonfuls of ginger, mixed to a heavy slush with water, baked thoroughly and pried loose, then turned over and baked some more, make a great noon snack staple. Unlike the biscuit and the flapjack, it tastes well cold, it will stand rough handling which would grind bread or crackers to the original flour, and it will keep moist and fresh a week or more. It cannot, however, be recommended for folks with brittle or artificial teeth. Well-read camp cooks will recognize the recipe as that of Mr. Kephart for "army bread," with variations.

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THE FOUNTAIN OF YOUTH

By CHARLES T. JACKSON

AND BACK TO THE SEA

CHAPTER IX

(*Continued*)

Adrift with the Floating Gardens

VAN NORMAN was proud of his camp and gang. He insisted on taking us up the pullboat road after the meal, but I decided to go hunting in a light "runnin' pirogue" in the swamp. Hen went back to the "slashin'," and had a most diverting time trying to keep dry by jumping from log to log on the pullboat road. He gave it up after awhile and went in as the swampers go—regardless of the water. I went in far enough to get a sense of the forlorn aspect of the forest after the "falling crew" is through with it—the gigantic cypress thrown in every direction and the skinned young saplings struggling up through the wreck from the water.

Van Norman insisted that we occupy the quarterboat with his white men, but we preferred to make a camp, so at dusk we dropped down stream to a fine grove of oaks on the highest bit of land we had seen in weeks—quite six feet above the river. Latanier palms, hackberry, brilliant young maples grew about the point, while back of us was a perfect mat of blackberry vines.

We fell on them before breakfast with gusto. "Let's stay a week!" said Hen. "Blackberry smash for lunch and blackberry pie for dinner. And listen to the birds sing! Every blamed one of 'em is probably good to eat!"

We had guests for breakfast—two shy young Creoles who were paddling from Forked Horn bayou, they said. They could not talk much English, but when we motioned to the coffee they accepted with enthusiasm. Then along came young Keller, the bookkeeper, just to see how we were making out and to ask us up to Van Norman's to dine. We all made coffee again and drank it about the coals—three times since we got out of bed!

Again, ye neurasthenics, how about five cups of coffee before ten A.M.? Before we came in the big woods and forgot the banal towns, one brew of the stuff would have demoralized me. And this was *coffee*—not the boiled Northern concoction. We could drip it now with any wandering hunter of the swamps and earn his commendation.

We went fishing in the afternoon—lazily. And the fish bit lazily, not seeming to care whether they got hooked or not. We paddled to the pullboat, dined with the boys and stayed until ten o'clock. Then we pulled away from the camp, dropped easily down river in the starlight, well pleased with ourselves, until Hen suddenly shifted, looked around at me, and remarked:

"By the way, do you know where our tent is?"

I didn't. It dawned on us that we had been shot by the current into the narrowing part of the river where the great trees overhung, making an impenetrable darkness. And somewhere along here we must find that camp! We could see nothing, except now and then the dim top of a tree clump against the stars, and we could hear the gurgle and whisper of the river under the overhanging boughs. We didn't care particularly about being capsized on these current-swept limbs.

"Gone too far," said Hen, and after a consultation we came about and paddled up. We racked our brains to think

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of some distinguishing mark by the tent —and couldn't.

"There was a clump of palms right back of us," I murmured, "and a big oak——"

"Lot of good that is! Can you see a thing?" Then Hen sniffed—"Ha!"

"Ha—what?"

"I have it. I smell it!"

"Smell what?"

"Pie!—camp—*home!*"

"Darned if you do!"

"Yes, I do. That blackberry pie that dribbled so—and you laid it on the big stump right by the water! Hard-a-starboard! Dig!"

Now did two lost woodsmen ever retrieve themselves with a blackberry pie? We did. I told you we would tell you something you never heard of before. In the curriculum of woodcraft, find a place for blackberry pie. Hen could nose his way around the world in the wake of a blackberry pie. In ten minutes we were ashore, struggling through brush, feeling about, striking matches and — then I rammed my fist square down into that blackberry pie. Next morning it was a total wreck, with many ants trying to claim salvage on it.

Hen went back to the pullboat to try for more pictures of Van Norman's crew. I borrowed Keller's "runnin' pirogue" and went after squirrels down the river. I pumped one load of No. 7 at a big brown eagle and he merely smiled down at me. Here and there, on the gray bark of the trees a squirrel dodged about. I had to pot them as the canoe shot by in that dancing current. Let me tell you shooting squirrels from a pirogue calls for some delicacy of judgment. The kick of the gun will upset as ticklish a bit of wood as I was in unless one has his shot figured to a nicety. You get a glimpse of the squirrel swinging from limb to limb up in the filigree of green against the light, you swing hard on the paddle with your right hand, bringing the pirogue hard about, raising the gun with your left as you come bow on with the quarry. Then—quick or never! You drop the paddle, brace your knees on the coaming, swing your shoulders tensely back, bring the gun up, find your squirrel, and shoot just as the sight comes squarely over the pirogue's nose. I tried one broadside shot and nearly went over in that swift water. And once over I never could have got back to camp until they came to look for me, hanging to some half-submerged tree.

I managed to bag three squirrels, having no end of difficulty in finding them, for they dropped plump down in the water through a magnificent tangle of vines and bamboo brier. But it was novel and exhilarating sport, giving one a thrill worthy of bigger game, for one was fighting every minute against the treacherous boils and eddies sucking under the jungle banks. I killed a huge fish-hawk as I paddled back, catching it so fairly above me that it fell straight down, landed on my knees, and sat there glaring up. I heard a shout of laughter at this, and discovered a Cajun hunter balancing in his pirogue, holding to the twig of a tree, and looking at me.

"Das good!" he cried. "But, man, don' yo' try sooch fancy shoots out-a dat leetle coffin! No Yankee can run *dat* pirogue!"

I was some set up when I got back to Van Norman's to discover that the boys had given me the most treacherous bit of cypress shell in the camp—and thought I wouldn't dare shoot from it. I didn't tell them of the practice I'd had pirogue hunting with Florion Landry.

Mangy, the colored cook, insisted on stewing that fish-hawk for us, but we declined. So he served it to the black hands. They said it was great. Maybe, but it didn't look so. I'd already eaten mink fricassee and alligator gar and shark meat, but somehow that stewed hawk didn't resemble anything that we thought would do our hair or dyspepsia any good.

"Mangy," said Hen, "give it to the boys with our blessing. I'm feeling too fine now to experiment with hawk stew —we'll be mighty generous, Mangy, and let you have all of it."

Thirty miles below we stopped at Forgey's Belle River camp. It was the model cypress camp of the region, and the genial boss was very proud of his whitewashed buildings and orderly crews. They were a most hospitable lot on Belle River. I recall that Hen and I

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had expressed a lively interest in the fishing, and further that a gaspergou would be fine for breakfast.

And the next morning at dawn we were awakened by the most awful explosion I ever listened to. It fairly blew the mosquito bar off our bed above the store. We dashed madly for the windows, to discover a cloud of smoke rising over the river and four boat-loads of niggers yelling and splashing about.

"What in blazes is the matter?" shouted Hen down to the storekeeper.

"Oh, nothing. The boss heard you gentlemen say you liked fish, suh! So he sent the boys out this mawnin' to bag a few."

Shades of the game laws! They had genially dynamited a whole cross-section of Belle River, and were now lugging in a couple of barrels of 'gou and catfish for our breakfast! We ate and said nothing. *Tres bien?* But some day Louisiana will be sorry for this devil-may-care license of her hospitable swampers.

CHAPTER X

On to the Gulf Coast Islands

WE went on down Belle River two days later, having acquired directions for reaching Lake Verret and then Bayou La Fourche. The May weather was warming, and we wanted to see salt water.

"I ain't saying we're going to cross the Spanish Main in the *Bantayan,*" said Hen. "I ain't even saying we're going to hook a tarpon, or plug a bear in the canebrake. But we'll get to Grand Isle and make camp and cook a whale of a breakfast. Then we'll have a smoke and figure out the rest of this voyage."

And that last night of the big cypress swamps we had a tug of ineffable regret. It was on the east shore of the lake, with the tent set up on a tiny bank of white shells, the mirrored water in front, and back of us the ghostly plumes of the gigantic trees. Not a sound was in this flooded jungle, and away to the south over the Gulf a storm was winking languorously. We lay before our red fire and pulled on our pipes.

"They told us we'd get fever," murmured Hen, "and snake-bite. Or that some renegade of the deep swamp would pot us in our blankets some night. And look at us? Three months of sleeping on wet ground, or on a platform shack, or in a tree—eating any old thing that we happened to have—and look at us! Forget that I've got a stomach. And hair—oodles of it! Just coming on—I swear, I can feel it. Old top, do you want to go back and wear town clothes?"

"I hate to think of it!"

"Well, don't. Let's roll in and forget it!"

And the next day we paddled sixteen beautiful miles from the swamp lake to Bayou La Fourche, passing a shack and a dredge or so, working in and out of the hyacinth and iris bloom in narrow channels until we struck the small farm country of the upper bayou. There were some quaint little ante-bellum towns along the way, looking like bits of French New Orleans, with ornate galleries and stone banquettes, narrow and prim. The ancient levees were too high to see much of the small farm country, so we bargained with an Italian oyster-man, threw the *Bantayan* on the fore-deck of *The Good Child,* and went down La Fourche some sixty miles on her.

The next morning, after sleeping in the gasboat's fishy-smelling hold, we loaded the *Bantayan* and set out for the sea. It was by far the most oddly foreign bit of America we had ever seen. The neat little farms, the fat and placid cattle knee-deep in the pools under the oaks, the women hoeing in the fields, and the gentle-mannered men who asked us to their galleries for coffee, all must have been a bit of rural France. The next day's paddling took us out of this into sunken shores of gum and willow, the dim forest wall behind the cleared land gave way to ragged skeletons of trees. There the marsh lands began that stretch away desolately to the Gulf, ending in those lonely, shining reef islands of south Louisiana of which even the native New Orleanian knows nothing, except that, now and then, they are deluged by the terrible sea storms, and over them always hangs the haunting sense of romance of Jean Lafitte.

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We paddled on after the last houses gave way to marsh and mangrove scrub, with a palmetto camp and okra garden here and there, and finally Hen sat back.

"The sea!" he exlaimed, and pointed buoyantly off to the south, where the sun struck on gleaming bits of sand and flats of green.

We felt as much set up over it as did Balboa discovering the Pacific. He hadn't voyaged in any thirteen-foot cypress log.

But it was a long day's work to reach salt water. We passed a somnolent fishing village and, being warned at the store not to run down and outside in the *Bantayan*—and for once, the sun being hot, feeling inclined to take advice—turned off on a nine-mile strip of canal that ran eastward to Caminada Bay. And maybe it wasn't hot in that ditch running between margins of tall salt grass and mangrove? What was worse, we did an inexcusable trick.

Half way down the ditch we discovered that we had forgotten to fill our canvas water-bottles! There wasn't a drop of drinkable water on board. And the canal was salt—salt as the blue sea.

We looked at the blaze of sun over the marsh.

"Push ahead," said Hen. "If we don't find a camp on the bay we're stuck badly, but let's take the chance. It's seven blistering miles back to La Fourche."

We dug in perspiringly. And, as luck would have it, when we came out to lonely Caminada Bay we discovered a fisherman, and out of his lugger's barrel of warm, sickish rain-water we got our fill. Our friend did more. He drew the *Bantayan* up on his lugger's fore-deck and sailed off with us past La Cheniere, that island of the dead, of which the Gulf coast folk speak and then cross themselves, for few there are who did not lose kin in the storm which utterly destroyed it in '93. Far to the east was a smudge of dark green trees, and when it drew up out of the rippling water, Andreas of the lugger landed us on its sands. Over across the oaks and magnolias the Gulf was roaring. We had come to Grand Isle, having made all but a complete circle of the southern coast network of bayous since we left New Orleans so aimlessly the first of March.

"Old top, it's the fifteenth of June!" said Hen; "did you ever realize that we've put in almost four months bumping the bayous in the *Bantayan?*"

"Yes, and where's your big tarpon you were going to hook with all that gimcrack tackle!"

"Blessed if I know!"

"Where's the bear you were going to plug with that automatic?"

"Search me," returned Hen solemnly. "Anyhow, I don't want to hurt 'em. I feel too good-natured. I feel—I feel—say, old top?"

"What is it?" I answered.

"Before we catch a steamer back to New Orleans and civilization, let's tug the *Bantayan* across the island and out through the surf; and then stand up in it and give three cheers for Old Ponce and his Fountain; and then we'll let a big wave flop us upside down, and we'll swim ashore and let the good old *Bantayan* go to Davy Jones—out with the undertow and ebb tide—where she will. We can't take her North with us, and I'd hate to think—Oh, I wouldn't want any crab-fisher to buy her—she's been too bully good a friend to you and me!"

"Right-O, Matey," I answered. "But what's become of that indigestion of yours?"

"I don't know." Hen grimaced. "I just can't remember. Do you recall the crawfish bisque that Felix Landry gave us three days hand running up in the Atchafalaya lake country? *Three days* we ate it—you and me? Oh, Lordy, man—let's go back next year!"

The End

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CURING THE SLICE IN GOLF

By E. R. STUART

DIAGRAMS BY THE AUTHOR

In Which Is Shown the Simple Reason for Slicing and the Obvious Way to Stop It

THE slice is unfortunately a common fault at golf, destroying all hope of accuracy as well as distance in the drive. The remedy becomes obvious as soon as the cause of slicing is thoroughly understood. That it is due to a horizontal rotation of the ball in its flight is unquestionable, from the analogy to the curved ball in baseball. The question is as to how this motion of rotation is imparted to the ball.

The explanation ordinarily given is that the club is drawn inward as it crosses the lowest point of the swing, thus giving an oblique impact. This theory is illustrated in Figure 1, in which *aa* is the line of the feet, *bb* at right angles to this the position of the face of the club, *cc* the supposed path of the head of the club in the swing, *d* the direction of the flight of the ball with a resulting rotation indicated by the arrow *r*. With this understanding of the cause of the slice, the remedy prescribed is to advance the left foot so as to correct the direction of the swing.

It seems comparatively simple to prove that this is not the true cause of slicing. In the first place, if any golfer will take his stance on the tee, and through the proposed position of the ball scratch on the ground two lines indicating the direction of the swing for the slice and the pull according to the above explanation, as in Figure 2, he will find that it is clearly impossible to cause the head of the club to pass over either of these two lines with any sort of a free swing. If this oblique swing were the true cause of slicing, no one could slice or pull even if he deliberately tried to do so.

Several proofs will now be given to

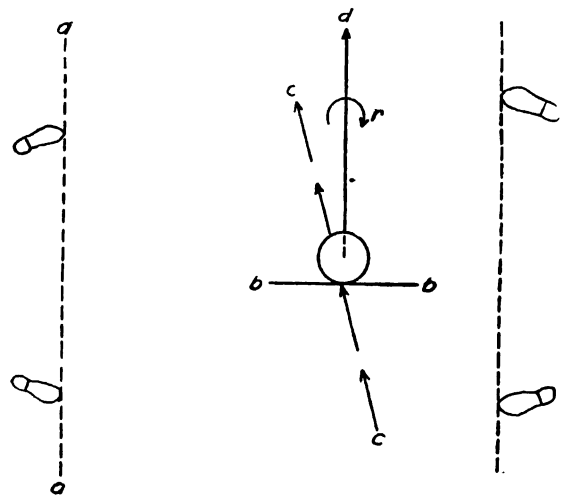

FIGURE 1

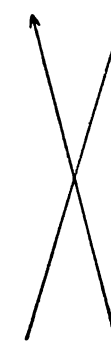

FIGURE 2

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show that the slice arises from an entirely different cause. What is sought is a logical explanation of the way in which a horizontal motion of rotation is imparted to the ball.

In many of his shots the billiard player

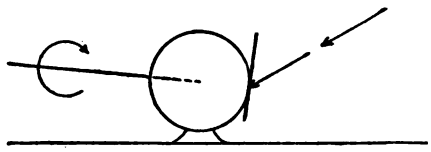

FIGURE 3

desires to impart a horizontal rotation to his ball. He does not do so by drawing the cue tip obliquely across the ball, but by making a sharp, quick thrust with the cue on a line parallel to the desired direction of travel, but to one side of the center of the ball. This shows that a horizontal motion of rotation may be given to the ball by a blow delivered in the desired direction of travel, provided the point of impact is off the line through the center of the ball. If the cue strike directly below the center of the ball, a backward rotation is caused.

In a perfect drive, it will be noted that the golf ball climbs steadily on an upward curve for the first one hundred

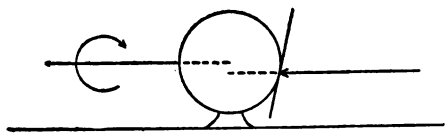

FIGURE 4

yards or more of its flight. This is due to the fact that the ball has had a backward spin imparted to it. If the explanation of the slice given above were correct, the backward spin of the ball would be due in this case to a downward direction of the swing, as in Figure 3. But in such a shot the club does not touch the ground, so this theory cannot be used to explain the backward spin which causes the upward curve of the ball.

As a matter of fact, the backward spin is due to the backward slant of the face of the club. When swung so that the head of the club is traveling in a horizontal path, as it does at the bottom of the swing, this backward slant of the face of the club is such that the point of impact is below the center of the ball. See Figure 4. The backward spin is thus given to the golf ball exactly as it is given to the billiard ball.

The explanation of the slice and pull at golf is now evident. For a right-handed player, the slice is caused by an outward and backward slant of the face of the club at the instant of striking the

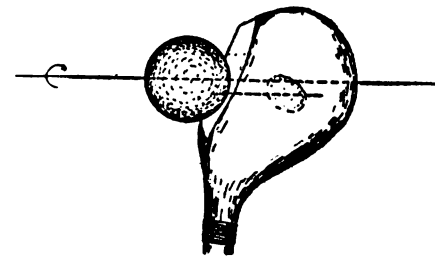

FIGURE 5

ball, a position produced by a slight backward turn of the wrists without any other modification of the position of the club. This backward and outward slant of the face of the club causes the point of impact to be below and inside the center of the ball, as shown in Figure 5. This imparts a rotation about an inclined axis, so that the ball spins backward and outward. The slice is therefore always accompanied by an upward curve of the ball.

If the wrists be turned forward, the

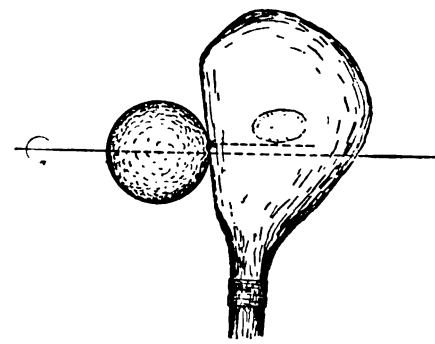

FIGURE 6

face of the club is turned so that it slants inward and is practically vertical. In this position the point of impact is

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outside the center of the ball, but not below it. The ball, therefore, has an inward horizontal spin (see Figure 6), but with no backward vertical component. The ball therefore does not show the rising curve noticed with the straight and the sliced ball, unless the pull is very slight.

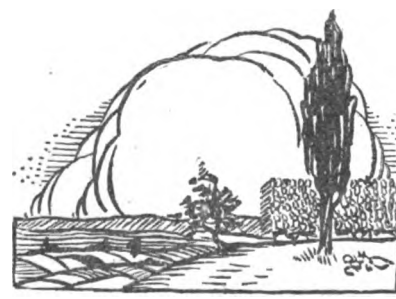
Another bit of evidence that the above is the true explanation of slicing is the fact that if the driver strikes the ground behind the ball (sclaffing) the result is usually a straight or pulled ball. The explanation is that in sclaffing the back edge of the sole of the driver strikes the ground if it is turned so as to produce a slice, and in so doing, the head of the club is turned forward before it hits the ball, thus removing the cause of the slice.

The pull, the rising straight ball, and the slice are all thus the product of the varying position of the face of the club when it strikes the ball. These various angles are produced by turning the wrists while making the swing, a comparatively slight motion which passes unnoticed among the other movements of the swing.

The remedy lies either in eliminating the twist of the wrists or in compensating for it by turning the club in the hands while addressing the ball. If you are a confirmed slicer, turn the club in the hands so that the face slants sharply inward while the hands and arms are otherwise held in the usual position. Address the ball with the club in this position, and then swing as usual. You will be agreeably surprised to see a straight ball or a pull. A few trials will serve to determine the position of the club in addressing the ball which will give the desired straight shot.

All the curves, the slice, the pull, and the rise are sharply emphasized in long shots. The sharp hard blow of a rapid stroke sets up a much more rapid rotation of the ball, just as in the billiard shots.

An early issue of OUTING will contain an Article by Harry Varden, giving the result of his observations and experiences in this country last summer. It will be a useful experience for American Golfers to see themselves as Varden sees them.



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THE SAD TRUTH ABOUT DUCK SHOOTING

By WILLIAM AUBREY

Much Hard Work, Considerable Mendacity, a Little Luck, and Now and Then Some Shooting

"JUST what do you know about duck-shooting, not theoretically, but practically?" Nine times out of ten if you ask that question the average man says, "Why, all about it—what d'y' want to know?" and the same nine times out of ten he really won't know anything.

I was one of the "nine times"—theoretically I knew all about it, knowledge obtained from sporting magazines, hearsay, etc. Practically, I had never shot a duck in my life—nor even shot at one. I didn't know a black duck from a broadbill, and yet I thought I really knew about ALL that was necessary.

Why all you have to do is to get a few decoys, throw them into the water, disguise yourself as a bunch of marsh grass, and wait. Then, when Mr. Broadbill, or Mr. Redhead comes along you sit up and say how do you do with a 12-gauge loaded with 4's and wade out and pick up your ducks.

That's the way it goes—theoretically. Practically it will be something like this, especially if you are the average outdoor man of to-day, keen for anything that will take you into the open—even at the expense of your reputation as a Nimrod. You'll probably get an invitation from a friend who knows the practical side as little as you do. He only asks you because he thinks you know and you accept because you think he knows. And you both get stung.

After you accept you'll spend about $2.87 for some shells, making sure to ask the dealer the "correct thing for ducks," and $8.00 more for a pair of waders. If you're going to do this thing at all you must do it right! Then if you haven't a gun, you borrow one. You bother your wife (if you have one) to death digging up your old clothes—and you're nearly ready.

Then you sit down and write a letter to Joe down on the shore, who you know is a practical duck shooter, because he has a sailboat and a lot of decoys—and he, being a friend of course, sees through your veiled invitations and says, "Come ahead."

And so your friend who asked you to go and Joe, who wrote "Come ahead," and yourself get up about four o'clock in the morning—a thing you wouldn't do for your wife and you'd chuck your job before you'd do it for your boss—and it's as dark as midnight and as cold as the North Pole. Somehow you get into your clothes or your friend's, if you're near of size, and you stumble downstairs to a breakfast of fried eggs and weak coffee and you're nearly ready.

Then you load yourself like a packhorse with guns, shells, lunch, and camera (for you must have a picture with the ducks artistically arranged over the cabin-top) and you walk half a mile or more to the landing. Probably on the way your fingers will get cramped with the cold and you'll drop the camera and when you go to pick it up the shell-box bursts open and the shells are strewn over the ground. At that point you call a halt and all three of you grope around in the dark—and you swear—and then when you finally reach the landing you suddenly discover that you forgot the camera! Yes, you forgot to pick it up when the shells spilled, so you "cuss

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again" and beat it back and grope some more in the dark.

Finally, everything is accounted for and you heave a sigh of content, light your pipe, hoist sail, and drift slowly away from the dock. A light breeze catches the sail and you skim along at a fair clip and you think, "Well, this isn't so bad after all." Suddenly you notice that you're not making any headway. You look around and discover the breeze has died down. You shoot a questioning glance at Joe, who owns the boat and the decoys, and he mutters, "Wait awhile—it will breeze up again," but all the time it's getting lighter and you know you must make Cow Point by sunrise or some one will beat you to it. So you wait, and you fume a little and you get all nerved up. Joe says, "Well, we'd better get out the pole." He shows you where it is neatly stowed away along the centerboard trunk long enough to reach well forward and aft under the deck, and as you struggle to get it out you wonder how in several things he ever got it in there. You manage it finally, perhaps after stepping in the lunch or knocking a box of shells overboard—and you're keen to begin "poling" because you're kind of chilled from the cold, and you welcome this chance to get "het up." The pole feels like a feather at first and you jump to your work like a Trojan and the boat "purls" through the water as a boat should.

Maybe if you're pushing a 26-foot cat with a 12-foot beam, as happened to me, you'll suddenly discover that Cow Point is a thousand miles off and you're going the other way. The pole weighs sixty pounds by now and your back is about ready to break. "Buck-up," you whisper to yourself, "don't be a quitter," and you give an extra hard shove just to show you're a hero. That time the pole misses the bottom and you all but go overboard. In such a case you'll probably do as I did and swear "I won't pole this boat another foot if I never see a duck." Nobody cares, it's only the first lesson in the *practical* side you're learning, and the others are nearly frozen stiff from sitting still.

If you're lucky the breeze will spring up again and you'll hustle along to Cow Point and anchor. Then you'll cast off the gunning sharpies and paddle ashore with a conglomeration of guns, decoys, shells, lunch, and what not, that threatens to swamp with every wave and dip of the paddle.

Up east you hear a few guns banging away, and you're all thumbs as Joe explains their mechanism and peculiarities. A few birds drift by well out of gunshot and you're just about crazy to get busy. Your own decoys are all set out presently and look like regular birds, and deep down in your heart you really feel sorry for any ducks that come within gunshot. You pat yourself on the back and become real cheerful again.

"Too Far Out"

Then Joe discovers that you have anchored directly in the line of flight, so the boat must be moved around the point out of sight. Nobody volunteers. All three of you want to shoot—yes, you came to shoot, not to make a slave of yourself—besides, haven't you poled the darned boat a mile or more already? So Joe becomes the martyr and gets nearly around the point out of sight. Suddenly you hear him shout, "Broadbills—get down." In your haste you fall all over your friend who invited you, and out of one eye you see fifteen or twenty ducks headed for your decoys.

Will they see them? You wonder and you breathe a prayer that they will. And they do. You whisper to your friend, "Keep still, they're coming! Give it to them when I say NOW!" The ducks, coming in rapidly, make a beautiful low swing into the wind and down toward your stool. Your hands are shaking like a leaf and you wonder if you'll make an ass of yourself and miss. Now they're over your stool, a beautiful shot; you should get three or four with any luck at all. "NOW give it to them!" you fairly shout, and you both sit up from the blind, your finger presses the trigger, and—"click," click," from both guns tells the tale of empty chambers. In your haste to shoot you forgot to load. You look at your friend and he looks at you. You're silent. No words can express your

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thoughts, and your thoughts aren't fit for publication, anyway.

Joe returns about now and asks, "Why didn't you take a crack at those broadbills?"

"Too far out," you lie with a side glance at your companion. And so you learn a second lesson on the practical side.

Yes, there's a lot more to it than you have read about. And very likely Dame Fortune will frown at the asinine stunt you just pulled, and she'll probably frown to good purpose. It usually happens that way.

Your friend of the unloaded gun and yourself won't have very much to say for the next few minutes, and you snuggle down in the blind in a vain effort to keep warm. Suddenly you feel a light breeze in your face—you hadn't noticed that it was blowing at all. It freshens and a minute or so later a young gale is blowing right on your faces and your decoys are making a valiant effort to keep from being washed ashore. Then, if you're a theoretical duck hunter, you'll wonder—if you're as practical as Joe you'll probably swear, for he knows that your stool is fixed all wrong if the wind holds from that quarter. He conveys this cheerful little bit of information to you in driblets so as not to make you feel too badly; you don't care very much anyway—you feel badly enough already. So you leave it to him. He waits fifteen or twenty minutes and then announces, "It's no use, we're fixed wrong for this wind; we've got to get over to the other side of the bay. We'll try Reed Island, just across. You fellows pick up the decoys while I fetch the boat," and he's off.

You don't know the first thing about picking up decoys and your friend doesn't, but neither of you will own up. You want him to think you know all about it, and he wants you to think the same thing. So you shove off the sharpies in the teeth of the wind and go to it.

It's hard work, but you finally run up alongside of two or three, shift your oars, and reach gingerly over the side for the nearest decoy. A puff of wind hits you and blows you back just enough to put it out of your reach. You make a final grasp and nearly go overboard from the effort—and miss. Then you start all over and this time you get well into their midst. Your oar catches on the string of a decoy, and by the merest accident you realize that you can get them aboard with the oar so much easier than by hand. So you stand up and balance yourself gingerly, oar in hand, and proceed to paddle and stab, and maybe after five minutes of the hardest and coldest work you ever attempted, you have a sum total of five decoys. Your friend has fared about as well, so you're that much glad anyway.

Finally, they're all aboard and you paddle out to the sailboat with a sigh of content. Everything's accounted for again and you make a second start, this time for Reed Island as your objective.

The breeze is fresh and it's a beautiful sail across as you tack back and forth. You smile, your friends catch the germ, and you loosen up and once more take an interest in what's going on around you. You feel real chipper and you even begin to speculate on the probable bag from Reed Island.

Someone Else on the Job

As you get nearer the Island your feelings take a mercurial drop—Reed Island is occupied—you're too late—an earlier bird has beaten you to it. So you tack back and forth footlessly and fruitlessly and speculate.

Deep down in your heart you probably blame Joe. You think he's an expert, he knows these waters, he should have known enough to try Reed Island first. Just about then you hear a bang! bang! and you see the occupants of Reed Island push off to pick up their spoil; yes, you'll probably think that's rubbing it in. It might just as well have happened to you, if you'd gone to Reed Island first instead of trying Cow Point.

So far you've had a splendid sailing party, but as for shooting—well, it wasn't for you. So you talk it over and decide on some place, no matter where, but *some* place, and you want to get there no matter if it takes all day.

Suddenly, dead ahead, you spy what

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seems to be a thousand ducks on the water. You get excited right away and grab for your gun. You're bound to have one shot anyway—but Joe says, "No, they're only 'ruddies,' and besides it's against the law to shoot ducks from a sailboat." So you desist. But if he's as good a friend as you think he is, and especially if he notices the gloom that has overspread your countenance, he'll say, "But if you fellows want to, we can paddle them, and we ought to be able to get one or two."

Of course you want to, you're in a condition to paddle a hippopotamus with a 20-gauge loaded with eights, you're that anxious.

So you anchor once more.

"Now, the thing to do," says Joe, "is to get to windward of them and drift down on them. They can't get up unless they get up against the wind, and that will be your chance. You two get into the sharpie with the oars and I'll come later after lowering the sails."

So the two of you climb into the sharpie and, not wanting to have all the pleasure yourself, you let your friend row. It's a pull against the wind, but —pshaw! He won't mind a little thing like that, besides it will keep him warm. So he, not being practical, agrees, but from the look that comes across his face after a half mile or so, you know you won't ever get him to do it again.

You're in line with the "ruddies" ("boobies" some call them), and you start to drift. It's cold, but you're so interested that you don't mind it. It's a long way and you don't seem to be making any headway—if you could only use an oar. But, no, Joe said to drift and he knows. So you drift, and after an hour or more, or so it seems, you get within gunshot. You tremble—you hope they won't rise quite yet—then suddenly you hear a swashing behind you and you turn to look—and *there,* standing up and paddling for all he's worth, is Joe. He's making about ten miles to your one. You gasp—you're too astonished to speak—he passes you, drops his oar, grabs his gun, and bang! bang! The ruddies are up and away—all but two—who have no further use for wild rice.

Then suddenly you find your voice. "What the blue blazes do you mean by paddling, when you told us to drift? And what do you mean by shooting at those 'ruddies'? They were ours." And so you yell and swear, and Joe answers not, but calmly picks up the birds—and so you learn another little lesson on the practical side.

Your friend and you are good and sore now at Joe, and the coolness continues even after you're back aboard. He's sorry and says he thought you knew how to do it. You capitulate and it's lunch-time—and still you haven't had a shot.

But the lunch soothes you and you shake hands and it's all right again. Over the lunch and the pipes you discuss whatever chances are left and you decide on a last stand at Gunning Point.

The Last Stand

"If there's nobody there we'll have as good a chance as any point on the bay," says Joe. And so you set sail. All the way you hope and pray that no one will be there. All you ask is *one more* chance. At last Fortune smiles and Gunning Point is vacant. You sigh, a deep-down sigh, and remark, "NOW FOR THE DUCKS!" So you fix your stool for the second time. You're a practical man now as far as this is concerned, and it comes easier and it doesn't take nearly as long. You're ready at last and in dead earnest. You must have at least one bird to take back to the city as proof positive.

So you climb into the sharpies, sink down in the grass, and wait—it's cold waiting, but you grit your teeth and swear you won't quit until you've had a shot.

Just when the sun is about ready to go down in the west, your friend whispers, "Quiet; there go some broadbills," and he sticks up a leg to get their attention. They swing away, then back, catch sight of the decoys, and decide they'll risk it. They swerve down over your stool, Joe says "NOW!" and the three of you pump six shots as fast as your fingers will pull the trigger. Lord! how those ducks did get away—all but

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one, which Joe promptly claims. "I picked it out," he says; "it was the leader." You let him get away with it because you didn't pick out your bird, you were so wildly excited that you simply fired into the bunch, but you register a mental vow that that's the last thing he'll get away with. You'll claim the next bird that drops and stick to it, even if you have to come to blows. You're learning.

Then a motor-boat "put-puts" up the bay and you swear that it will scare every duck on Long Island and ruin your chances—and it does—it scares up a bunch of seven or eight and you stick up your foot this time for luck—maybe they'll see it and decoy. Fortune smiles once more and they see it. They sweep around in a half-circle, flying low—you wish they'd get up so they could see your stool. You're worried—then suddenly the leader swings toward you—they have sighted your stool. Once more the "Quiet!" stills you into a frozen figure. They circle beautifully, you note that out of the corner of an eye. You daren't breathe—then they're into you. "Give it to them!" someone shouts, you don't know who, but you obey and the fusillade that follows is a reminder of Fort Sumter.

The startled ducks climb into the air at a speed you never thought possible—but this time there were *three* that didn't and, remembering the mental vow registered a while back, you promptly claim "the one that fell in the decoys"—and you get away with it. Your friend, taking pattern after you, claims one also but anyway what's the use, there's a bird apiece—and you're happy, you're foolish, you talk and babble like a sixteen-year-old girl. Gee, but you haven't had such a day in twenty years—and Joe catches some of your exuberance and says, "Well, that makes six; we'll divide the whole lot and that will give us two apiece."

And so you're happy—you've had your *day* of *days,* but above that you've graduated, you've learned your lesson—you know duck shooting from the practical side.

THE STAG SHIRT

By ROBERT E. PINKERTON

A Sensible Lesson in Woods Clothing Learned from the Old-Time Riverman and Lumberjack

THE old-time riverman and lumberjack did not believe in long trousers. Caulks caught in the bottoms, they were wet and flapping and dragged and wore at the knees. And no one who lives in the North Woods ever wears his trousers folded inside his socks or shoes.

So the lumberjack cut off the legs with his jack-knife, usually about six inches below the knees. He called it "stagging" them. Many a new clerk in a logging town store has been horror-stricken to see a customer buy a suit of clothes, throw the vest on the floor, and sever a foot of cloth from each trouser leg.

The riverman, working on the logs in early spring, exposed to snow, sleet, and rain, needed other protection than his heavy underwear and "top" shirt. A mackinaw coat prevented free use of his arms and body, was heavy and altogether impossible because the old-time lumberjack had only scorn for the man who wore a coat when working.

So the riverman bought the heaviest "top" shirt he could find and wore that outside his trousers, that he might remove it in the warmer mid-day. He found the tails were heavy and clinging when it rained, so he again used his jack-

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knife and "stagged" his shirt. It became an ideal garment for his purpose. In driving logs down river, when there was no place to put his extra garment if it became too warm, he tied the sleeves about his waist and let the short shirt hang behind like an apron.

When manufacturers of woodsmen's clothing learned of the lumberjack's waste of perfectly good cloth, they began making short-length trousers and heavy shirts that reached to the middle of the hips. The lumberjack has been wearing such clothing for many years, but, until the last year, the all-around efficiency and adaptability of the stag shirt as part of the sportsman's wardrobe has been overlooked, and even now the sportsman's outfitter does not know there is such a garment. Some men who have hunted in northern Michigan, Wisconsin, and Minnesota have seen and realized the value of the stag shirt, but outside of a logging or driving camp it is practically unknown.

The stag shirt solves the coat problem for the canoeist, hunter, or any man who goes into the forest with the idea of getting the utmost efficiency from every pound of the equipment. It occupies little space in a pack and serves as an excellent pad beneath paddles or yoke when carrying a canoe. If of a good quality of heavy wool, it is windproof and will shed water all day. It is light and does not hamper the free use of the arms or body. In short, it serves all the purposes of a coat without the weight and cumbersome effect. It really takes the place of the sweater most out-of-door men carry, for it has all the advantages of the sweater and the added value of shedding wind and rain.

I have never seen a stag shirt on sale except in small towns in the North Woods. Last year a firm in Duluth, Minn., placed them on the market for hunters and canoeists. As is usually the case when a city man adopts something from the wilderness, "improvements" were added in the shape of pockets which will catch on brush and interfere with a paddle stroke. The shirt was also gathered in at the bottom with a puckering string, thereby giving a blouse effect and furnishing additional holds for brush and snags. Some adhered to the riverman's pattern. Many bright colors were furnished.

Such a shirt should fit just a trifle loosely and hang freely from the shoulders. Pockets tend to make it only more like the objectionable coat. The natural gray color is best. Brilliant dyes are not good for wool. The cloth should be 32 or 36 ounces to the yard. Lumberjacks generally pay three dollars for such a shirt.

Soon you'll be thinking about getting your motor boat ready for the coming season. Therefore, read Stillman Taylor on Putting the Boat in Cruising Trim in March OUTING

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A BLUE RIDGE TURKEY TROT

By TRISTAN NORM

Out with the Thoroughbred Hunters Along the Backbone of Appalachia

THE night of October 14th found me, in response to a quaintly worded letter, at my old hunting-grounds in the Blue Ridge in a great state of excitement and expectancy, for at last the great Turkey Hunt, arranged in my honor by "Old Tom," the greatest turkey hunter in the Settlement, was about to come off and the news had spread far and wide through the hills. This excitement was not in the least allayed by the negroes coming in from the Plantation to tell me "Howdy" and to stand around the fire and say something soothing like this:

"I seen five big flocks o' pa'tridges down in the Pear Orchard; must'er bin forty in each one."

"Ev'y time I come through the Low Groun's, 'long erbout sundown, I skeers up a lot 'er them woodcocks—made me think erbout you."

"Fezzants is a drummin' so loud up on Long Mountain you can't hear yo'-se'f holler."

As I couldn't sleep a wink, I got up about three o'clock, dressed, and tried to read, and had just succeeded in stupefying myself with a hymn-book—the only literature in the house—when a terrific yell outside made me jump up in a hurry. Looking out, I could see by the frosty starlight a troop of seven armed horsemen cavorting around the lawn.

"Come on outer there, old man! Day's a-breakin'. Hurry up, hoss; we've got a ways to go this mawnin'."

It looked as though Mosby's Men had started on a raid again.

Sluicing down a couple of biscuits with some cold water, I jammed some more grub in my pockets and flew out the door in full hunting rig, to the great astonishment of the hunters, who thought a "City Man" must take at least an hour to dress.

"Dogged if I ever seen a feller git in his clothes so quick," said Old Tom. "Bet he didn't wash none" (which was quite true).

Off we clattered at a great rate down the frozen road, walled in by crumbling old stone fences, covered with grapevine and sumac, which had known many a deadly ambush and headlong charge by just such a troop as ours.

"Many's the time," said one old graybeard who had been with Mosby, "many's the time we run 'em along here —and to tell the truth about it sometimes it was *we* done the runnin' away from them Yanks."

As day began to lighten, John Allan, one of the keenest hunters that ever lived, said to me:

"Load your gun and look out for a bunch of quail I seen the last time I was by this old forge. They orter be hanging round here somewheres."

I was just getting ready, when up flew a big covey, and, lighting on top of the stone fence, hopped off on the other side. Allan rode up to the fence and, looking over, fired down into the grass. Two quail flew by me and I dropped one in the road, shooting with one hand, to the great admiration of Old Tom, who couldn't shoot on the wing.

"Axident," he hollered. "Axident. Couldn't do it ag'in if you was to try a thousand years." (Another truth.)

Allan picked up ten quail and was very proud of his shot. Very few of these men can shoot well on the wing, but, as they say, "they are hell on the ground."

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It was a good start and off went the troop again in great good humor. At times progress was interrupted by somebody firing his gun into a crevice in the stone fence and dismounting to pull out, after tearing out a lot of stones, a rabbit whose head he had blown off. How they can see the eyes of a rabbit way in there is a wonder to me.

As we were going down a steep hill a gray squirrel started along the fence, heading for an old chestnut tree some distance away. Off went every man in wild pursuit, yelling like a lot of boys and jumping their horses over places you could hardly crawl over on foot. Old Bushtail eluded the charge and dived into a hollow tree. It was an interesting sight to see eight horsemen surrounding the tree and all gazing longingly at a little hole, way up the trunk.

The Lure of the "Squer'l"

The fondness of Southern hunters for "squer'l" is quite amazing. There is no trouble they won't take nor any game they won't leave to get one. "Finest meat in the forest," is their saying.

Just as we were preparing to smoke him out, someone discovered another squirrel and announced that the woods were full of them. This came very near bursting up the Turkey Hunt, as four of the hunters decided to stay and "git them a mess."

So when we entered the trail leading into the mountain our party, which had started off so proudly, consisted of four: Old Tom, John Allan, myself, and a colored boy, to hold the horses. He carried a little single-barrel 20-bore popgun, just "to keep off wile cats and not git lonesum."

I had heard of the surefooted mountain horses, but never before had I seen them in real action. They climbed up the bed of a dried-up trout brook. They jumped over fallen tree trunks, they crawled up rocky hillsides, and over places that would have given a chamois heart disease. Sometimes I let the bridle drop and just hung on to the saddle, and it was as much as I could do to stay on that way.

At last my visions of being mashed into a Hamburg steak, with a 1,200-pound horse on top, were ended by our coming out on the very backbone of the mountain range. Far down below us we could see an eagle dropping through the mist to strike some lamb or rabbit in the blue-grass valley. We were high above everything.

Tying our horses to saplings, Old Tom proceeded to fire off a sermon at me about what not to do.

"Now, Norm, don't you never make no noise when you're a-walkin' in the woods. Turkeys kin hear a mile an' see outer the backs of their heads. Don't you smoke none, and don't you shoot at nothin' less'n it's a deer or a turkey."

I was perfectly certain that he was going to let off his old "pot-leg gun" at the very first "squer'l" he came across, but resolved to follow his instructions. I had not quite finished resolving when an old cock grouse flew up in a dogwood tree and began to pick berries and to make an adorable kind of a noise. Now, if there is anything in this world that I dote on it's a ruffed grouse. I gazed and aimed and aimed and gazed, until at last, having discovered me, he flew off with a horrified cluck and I moped sadly along, trying not to make any noise and making about as much in the dry leaves as any two horses.

For once virtue and self-denial were to be rewarded. In a clump of locust trees, interlaced with chicken grapevines and wild raspberry bushes, there was a sudden commotion and a rushing together of dark forms, and with a mighty flapping and clattering of wings and legs up got the biggest flock of wild turkeys I have ever seen. The air was simply full of them. They flew all over the mountain. Some lit, swaying on the very tops of the tallest trees; others flew clean into blue infinity; but most of them came down in the huckleberry bushes far down on the side of a dark ravine.

"Quite a bunch," said Allan, suddenly appearing from nowhere (a little way of his. He was said to have stolen up on a sleeping fox once).

Old Tom soon came in, in answer to a whistle, as did the colored boy who was getting quite wild because "Some-

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thing hollered at him way down in a dark place." I thought we were going right at them, but, no, indeed.

What must those fellows do but sit right down and eat lunch and smoke, just as though there wasn't a turkey within miles.

Lord, how endless seemed that lunch to me! No formal banquet ever was one-half as long. The dry old biscuits I was trying to swallow tasted like rosin; but that foxy old Tom was just tantalizing me and enjoying my suppressed misery. Well did he know his game.

"Now," said Allan, emptying his pipe, "how many do you want to kill?"

"Five," I answered, naming a seemingly extravagant figure.

"You'll git 'em, boy; don't you worry. Tom, you take the top of the ridge; Norm and me'll stay right here. The boy kin go back and watch them horses some more; they're a heap of company in mournful places."

Waiting for the Birds

We sat down about five yards from the edge of the ravine down which the turkeys had flown, without making any blind or attempting to hide.

"You aim your gun at the edge of that place; don't make no fuss, and I will bring 'em so close you can see the light in their eyes," said Allan.

In a little while the silence became intense. You could hear an old squirrel rooting around in the leaves way off, making as much noise as a hog. A log cock lit in a tree over my head and almost scared me to death, when he started to drum. At last Allan took out his "yelper," blew through it a time or two, then yelped twice, then again. Dead silence all around; even the squirrel quit rustling. Way off in the distance came a faint sound, "kyope-kyope-kyope."

Sufferin' snakes, how my heart did beat! I could feel my face getting red as fire.

"They're comin'," whispered Allan. "Don't you move nor make no noise. Don't even swaller spit backwards."

Then he called twice more and put his yelper away in his pocket.

Twenty minutes must have passed—not a sound. I was feeling perfectly wretched. I had the cramps, I wanted to sneeze and "swaller spit backward," and particularly to scratch my legs, up which an armed migration of ants were slowly directing their troublous but steady way.

"Look out," breathed Allan, beginning to scratch in the leaves with his fingers, by way of imitating a turkey feeling perfectly at home.

Over the edge of the ravine two long, snaky, gray heads appeared as if by magic, looking at us with bright, beady eyes.

"Shoot."

Up they flew with a mighty racket, straight up in the air like woodcock, and both fell crashing far down into the bushes as I gave them both barrels of my number ten, the echoes ripping and roaring for miles around in all the blue hollows of the mountain.

"Fine; that was a double. They never knowed what hit 'em. You don't often git a chance to do that. That five drams of black powder in each barrel sounded like a railroad blast. Better let things quiet down a bit 'fore we call any more. My head's a-ringin' yet."

This was the longest speech I had ever heard from Allan, and from him it was what three cheers would have been from another man.

Way off down the ravine a turkey began to yelp; three more answered him; it was dark down there, and they didn't like it. A lot more began to come down from above us to see what was the matter with them. The yelping was steady—continuous—the whole forest was ringing with it. We could see five at once coming in from one way, and two from behind us kept up a steady piping, as if they had a date with us and couldn't bear to be disappointed.

"Great king," whispered Allan, "I never seen anything like this since I been huntin'. The whole mounting is full of them."

When they got close enough we blazed away and knocked over three. One of the "pipers" behind us got mixed up and ran right into us, coming

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straight through the smoke. He rattled me so I missed him twice, and Allan "wiped my eye" very neatly as he flew up. The fact is that what with all the yelping, turkeys flying, and trying to look five ways at once, I was nearly crazy.

About this time the rest of the flock "took a notion" that there was something wrong going on, so they cleared out for good. We were about to do likewise, after a long wait, when an old gobbler came sailing along through the woods and lit about two hundred yards away in a clearing, where he began to gobble and strut around to beat the band.

"That's one of them old shiny fellers," said Allan. "He won't come in for nothin'. Many's the gun he's heard a-talkin' way up in the mounting uv a winter's mawnin'."

"Go on and try him anyway, Allan. Maybe he'll act like that piper that ran into me."

"Dogged if I don't try a trick what a old hunter learned me in West Virginia. Norm, you lay down here and I'll crawl off backwards a-yelpin', and maybe we'll learn old Gran-pap a thing or two."

I lay as flat in the leaves as any rabbit, while Allan slid off, yelping as he went, in the most seductive and lonesome way. This was too much for "Grandpap," so he flew off a log and strutted slowly toward me, pecking at the bushes and swelling himself up like a nigger preacher.

At last he decided not to come any farther, so he hopped up on an old gray rock about fifty yards off, and spotted me right away. Every feather on him shut up like a closing umbrella, and there he stood, the very incarnation of craft and alertness, watching and listening. This was the only chance, so I lammed away, pulling both triggers at once and getting a most calamitous kick.

"Grandpap" went off that rock like a turtle off a stump. I burned the wind down that hill and fell on him as he lay in the laurel on the other side of the rock.

"Good boy," said Allan. "Reckon you've got your five. There ain't nothin' in the world so smart but what there's something smarter."

That's the way it was with "Grandpap."

"Wonder what that nigger's a-shootin' at? I heerd a pop down the mounting a while ago. Hope he ain't got mixed up with that panther that's been skerrin' folks a-yowlin' roun' the hills o' nights. He chawed up one of Old Dooley's hawgs last week. If them horses smells him once we won't catch them for a month."

When we got down to the horses we were met by a perfectly frantic boy, brandishing his popgun and waving a big turkey about.

"That ole turk flew off'n the mounting and lit right spang in the horses. And me a-settin' there a-aimin' at him with my little gun. I jes' made a little prayer to the Lord, 'Lord, lemme git him, lemme git him,' and He done it."

Old Tom turned up with three turkeys. "I'd a-killed a dozen, but ev'ry time I was fixin' to make a little shoot, off went that ole cannon o' Norm's and busted me right up. We done right good anyway; we got 'leven, and we orter got twenty, an' we better be a-gittin' if we want to go down that fine ole pike what we come up this mawnin'."

Coming down the mountain, in the foothills, we met the disgusted "squer'l" hunters, with four measly little squirrels. What they said when they saw the horses loaded down with that magnificent game!

"Never heerd so much shootin' since the war," they said, "way up there in the clouds."

"Sounded like you fellers was a-tearin' the whole top o' the mounting off."

And so hail and farewell to you, hunters of the Blue Ridge. You are real Americans, companions of the right hand. How often, lying beside you in ambush in the laurel, when the great wild turkey was coming in to his death, have I learned what true gentlemen you are.

"Take the shot, Norm; you're hunting with me."

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THE FUN OF TRAP-SHOOTING

By PERCY M. CUSHING

THERE are nearly 3,000 trap-shooting clubs in the United States. This is an estimate, but a close one. At the present rate of increase the number may be greater by the time this magazine is on sale. As Weber and Fields used to say "this means somethings." It means primarily that there is a lot of fun in trap-shooting. If there were not the clubs would not be increasing at the rate of nearly eighty a month. What's the secret? Many old field shots have poohpoohed this new sport—and then fallen victim to its attractions. Such a one is Mr. Cushing, author of the article which follows. If you think there's nothing in it read his article. If you think the game is easy, go out and try it, as Mr. Cushing did—and then see what you think.

IN the beginning I got off the platitude countless others had pulled before me, and lived to take it back. "It's all right for perfectly nice young fellows who are afraid to get their feet wet or spoil their hands," I remarked audibly, "but trap-shooting for a man who has cast the frown of the blue tubes on a long, brick-brown head—thunder!"

I recall this merely to show that I was precisely like the other million or more men who were brought up to get their shooting in the field and who had yet to be taught that there was any worthy use for a shotgun elsewhere. I can realize now how my painfully ancient bleat sounded to the other folks, but—there came a day!

It was spring, when no full-grown man will go afield after game, but there was in the air the wet smell of mud and salt and the lines of the long forking rain. And it was sodden and gray and Marchy, and it hauled out of the past the memory of other Marchy days long ago with the forking rain, and the muddy odors, and the whiff-whiff of long slaty wings of wild geese. So when the boys came over and said there was going to be a shoot at the gun club I felt the touch of the smooth, round trigger on my finger, and I fell from my resolve never to waste chilled shot on inanimate clay targets, and went over.

Next thing I knew I was in a squad on the firing line, broke the first ten straight, reached the conclusion that smashing blue rocks was as easy as it looked, missed the remaining fifteen, tried another string with worse results, became first puzzled, then peeved, lastly desperately determined, and—decided after all there might be something to clay-bird shooting.

That was five years ago. Since then I've been trying, at least twice a week, to find out why the deuce I manage to miss one or two, or three to five, six, seven or eight or fourteen of every string of twenty-five I go up against. One minute I think I'm finding out; next minute I know I'm not, and—well, that's what makes it a regular game.

Now, right in the beginning I might as well state that this is not a treatise on how to do it. It's nothing of the sort. If I knew how to do it there'd be no cause for this wail. It's because I don't know that I'm having my chance to cry, because so many of us don't know, and because we all but conclude, at least once every three or four shoots, that we will never find out.

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The shoot was in progress that day when I reached the club with my trusty field gun. While I was waiting for my squad to be called I watched the other boys whaling away at the little scaling saucers and pounding them to the tune of 18, 20, 21, and better. It did not look hard. Pull, bang, puff—the haze of a miniature dust-cloud of ground clay, and "dead" from the referee.

As I watched I am aware now that I paid no attention to the angles at which the birds left the trap or their relation to the five positions on the shooting platform. I merely watched them float out from the machine and noted with contempt the way the boys had of holding their guns at their shoulders instead of below their elbows, as in field shooting. It was not giving the poor, inoffensive clay pigeons a chance, and yet, even with all the unfair advantages they were taking, I saw the shooters tallying "goose eggs" with fair regularity. At the end of the squad before mine the best score was 23 out of 25, and I then made up my mind that I would break 25 straight and end the matter of victory right there.

Easy at First

I was number three in my squad—the easiest position of all, where every bird, whether left or right quarterer, looks like a straightaway. Pull—bang! went numbers one and two, and it was my turn. I had made up my mind that as the others were taking an unfair advantage of the birds by holding their guns to their shoulders I might as well do the same thing, and I put mine up, held the muzzle just above the top of the traphouse, and called.

The bird was a straightaway "pop-up" as the old trap-shooters say. I saw it come out of the trap, followed it up and out, saw its edge just over the end of my barrel, waited an instant to be sure, and pulled. At the report the target split in twain, one part scaling to the left, the other over-ending downward to the right. "Dead," called the referee, and Bill Judson, who stood at number two, muttered under his breath: "Gosh, but that's a hard-hitting gun."

I was vaguely conscious of a feeling of resentment at Bill, not for the breach of etiquette, as much as for giving the credit to my gun and not to me, and—then it was my shot again. Once more I saw the target start, a dark streak, more to the right this time, but not enough to startle me, and I followed it again in the same deliberate, water-fowl style, and pulled when it was well out and just before it began to settle. It cracked in half at the shot, and I made a mental note that the other boys were shooting too quick—they weren't taking pains to be sure they were on their birds, that's why they were missing now and then.

I did not notice then that they were smashing to bits the ones they did hit, while I was merely cracking mine, and the next three birds followed the fate of the first two, and I went to number 4. There I began to notice the angles for the first time, but I got through my five straight at the position and went to number five. That, with number one, the most trying places on the platform, saw my Waterloo.

The first bird I called sneaked out of the trap to a gruelling left angle, sharp, and traveling at rocket speed. As it was sprung and came above the trap I lost it for just the fraction of an instant—that instant which old trap-shooters know is so often fatal—and before I had found it it was well away and buzzing. As I had called pull, I had automatically humped my gun out ahead for a straightaway. Now, as I caught sight of the bird scooting to the left, it required a complete change of mental preparation and consequently a complete shift of muscular action to bring the gun from the expected straightaway clear around to the left. And by the time I got it there the bird was way out, and I felt that I was not on it properly, tried to shift to cover it better, knew that I was wrong, made a desperate stab, and pulled trigger anyway, just as the bird began to descend. Of course, it got off scot free.

Had I not been trying to anticipate the bird I might have been able to respond to the angle it took without loss

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of time, and followed through smoothly and sweetly with every probability of a kill, instead of making an ill-timed, stammering, jerky stab. But at that time I had yet to learn that the follow through in trap-shooting is even more important than it is in golf.

In that one pottering, bungling miss all my confidence was snuffed. I had lost my first bird, and with those ten kills behind me I was nettled. I wondered why in thunder I hadn't seen that right angle come out, and determined that I must be sure to catch the next one.

"Twenty-three is high, and I had only to break all the rest to win anyway," I said to myself, and then, all of a sudden, Billy Judson was shouting pull, and it was my turn to shoot next.

I was determined to see that bird come out. I was not going to let any more sneak out on me. Involuntarily I raised my head from the stock as I called, the greatest and most fatal of all faults and the Nemesis of the novice. I saw the bird come out clearly enough then, but I forgot to clap my face down to that stock as though it was glued there, and though the bird was a straightaway, I must have shot a foot over it. I did not know that at the time, for I was not aware that I had raised my head. I had thought I had been right on that bird, and I couldn't understand why I had missed.

I forgot about the high score then, and just made up my mind that I must get the next one. But there was still in my mind the unpleasant memory of those two goose eggs, for I had not learned the philosophy of the tried trap-shot who steadfastly forgets what has gone before, religiously disregards what the future may bring, and concentrates solely and immutably on "throwing his shot," as he calls it, across the bird that floats out before his gun-glued face. Then the next bird swung out, and in my desperate effort to be sure of it I was slow and overcareful, and—it slipped through my pattern at sixty yards, as they frequently will.

I noticed that time that my gun kicked me. While I had been smashing them I had never dreamed of recoil, but as I began to see them scaling away untouched one after another the butt of the double-barrel began to come back harder and harder. When, after those ten straight kills, I had missed twelve as cleanly, my shoulder was sore, I began to feel jarred to the ground, and on the last three birds, all of which I missed, I recall that I did not once shoot my gun when I wished to. My brain would telegraph "shoot" to my muscles, but my muscles would not obey. They would give a spasmodic sort of jerk that usually pulled the gun muzzle off the bird at least a yard, and then, long late, they would act, and I would shoot in a jerky, undetermined manner that took my shot a long way from the proper destination. I did not know it by its name then, but I had developed a case of the worst disease to which the trap-shooter is subject, flinching.

Not Getting On

Oh, yes, as we came into the club from the score I was disgusted, sore clean through. But I could not forget those first ten birds I had nailed. I argued that something must have been the trouble with the last fifteen—that I had been doing something wrong; and then it came to me all at once what it was. Why, it was plain as day! Why I hadn't discovered it before I could not imagine. I had been doing what a field shot does so often—not getting on my birds fine enough. I'd been getting in their general direction and instinctively trusting to the pattern to help me out. I knew all about it. I'd found myself doing the same thing on ducks more than once and wondering why on earth I hadn't connected.

With the trouble diagnosed, of course I made haste to enter in the next squad. I knew I'd be all right this time. When I had smeared the first three birds of the string I felt my confidence meriting justification. But I lost the fourth and fifth, smashed the sixth, and then registered four goose eggs, mixed up the deads with the losts for a time, and rang down the curtain with five straight kills. Maybe my dope was wrong after all—maybe it wasn't. I didn't know.

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I was all wrought up. Feelings of mingled discouragement and elation sparred for possession of me. In the next squad, with the memory fresh of the five straight I had got in the last, I felt a bit of resentment when Bill Jones, the best shot in the club, stood behind me, coaching, but the feeling died as I put six goose eggs in a string before I tallied. And every minute my respect for the game deepened.

That night when I went home I turned it over in my mind. It wasn't field shooting, no! It had not the slightest resemblance to it, except that both were performed with a gun. It was a game all by itself, different, interesting, aggravating, flattering, filled with the grimness of determination, the scattery emptiness of despair, the warm fire of triumph. That night old Jim Davis dropped in, and when I told him I'd been trap-shooting he sniffed his contempt.

"Taking advantage of poor hunks of clay with your gun at your shoulder so they won't have even a fighting chance. Sport fit for lady-like boys. Merely mechanical. No real gun lover could —why, take an old cock grouse bursting from——"

"Forget it," I said with the calm conviction of an old timer. "Nobody but a green boob talks that way. It's the keenest game in the world. It requires better nerves, if not nerve, than golf. It wants a sharper eye than tennis, as much concentration as poker, and it's fickle as a pretty girl."

And that was the way I got mixed up with the thing. I've never succeeded in emancipating myself, though I have granted it to thousands of the little yellow-circled saucers of clay.

And what was the lure? Well, that's the problem. In the beginning it was success, with awful failure rushing close on its heels. Then it was swiftly alternating joys and sorrows, and perhaps next a grim determination to master an admittedly tough proposition. After that it was merely the pursuit of that determination to an ultimate end that will never be reached.

You know how attractive perversity is! Well, there are but two other games—golf and love—where this condition enters in anything like the proportion in which it exists in trap-shooting. If you could drive straight down the alley 225 yards every shot, pitch your mashie dead to the pin, and run down the putt every time you might lose interest. It's the foozles that make the game of golf, and it's the misses that make the game of trap-shooting.

Then there's the picturesque feature. Perhaps the old, dyed-in-the-wool trap-shot does not get so much out of this as the newcomer. In his case he either kills 'em or he doesn't, but with the novice he kills them in a good many different ways—many of which would make the soul of the real trap-shot writhe in horror. There's no use trying to explain the thrill of a well-smothered straightaway that goes off like a little bombshell as it drifts into the very core of your pattern. There's no use trying to analyze the warm leap of something high up in your chest as you swing past a sharp angle and see it die in a splash of shredded fragments on the sky.

The Real Shots

These are the shots for which the trap-shooter lives. But between them are a large variety of other shots. One would hardly realize how many different ways a clay pigeon can break as your shot catch it. There are the birds, not exactly centered, that go into smoke on one side, while the other floats unevenly down like a bird with a broken wing, highly undesirable to the earnest shooter who knows that to be consistently good he must center his birds, but interesting in a way, nevertheless. There are those that go into a little dust-cloud, ground and pulverized to black smoke—usually a sign of a bunchy pattern—and there are those from the side of which you merely cut a little chunk. And each one tells a story of close or ragged, sure or careless holding that is a school in itself.

It is a real man's game. It is a good deal like the game of life, in that the wages of sin is death—not to clay birds, but to scores. A mistake once made

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cannot be atoned for. Retribution is swift and absolutely certain. In golf, that other non-violent but great test of nerve and nerves, you can commit an error and by skill and courage make up for it. But a clay bird lost is a clay bird lost, and all the king's horses and all the king's men can't put it back on the score-sheet again.

Perhaps the slow, deliberate game of golf, with its time to realize that the world hangs on a single shot, is a better test of nerve, but not of nerves. There's a distinction. Nerve is the thing that can stand cool and unshaken when the universe totters on a single move and the mist of chaos rises before the eyes. Nerves are the things that must be right for a 100-yard man to cut the quarter second from 10 flat, or for the trap-shot to shoot 95 per cent to-day, to-morrow, and thereafter for countless to-morrows, with scarcely if ever a break. Ralph Spotts, holder of the indoor championship at the clays and one of the finest and most scientific shots in the country, says that to shoot clay birds in championship style consistently a man must be in just as good physical training as he must to run a quarter, or stand the long gaff of a November afternoon on a brown field when the crowds are singing the last stand with uncovered heads. On a man's physical trim depends the edge of his nerves. And it is nerves —or perhaps the acute absence of them —on which are built those 90 per cent scores of day after day.

Any old trap-shot will tell you, as they have told me and truly, that the slightest quiver of a nerve, the slightest straying of attention, will mean the loss of a bird, and the loss of a bird cannot be retrieved. A man whose nerves are subject to quivers will lose a good many birds, and every one of them is just that much away from the 90 per cent pace, and nowadays only 90 per cent, or better, is good enough to be considered in the race. A man with well-trained nerves under perfect control seldom flinches. Flinching — the involuntary jerking of the gun at the moment of firing—is the result of anything which interferes with the instant or smooth telegraph from the brain to the muscles. And nervousness is the surest thing to cause short-circuits.

The game of trap-shooting as she is now played is a game of endurance—endurance of nerves. A man who goes out and runs his first string of twenty-five clean, falls down to nineteen on his second, tallies twenty-two in his third, and slips painfully to sixteen on his fourth is not a trap-shot, though he may have given the impression as you watched him reel off his first and third strings. He is unsteady, and one of the principal things of trap-shooting is steadiness. The man who can consistently break eighty is a better trap-shot than the man who occasionally shoots to ninety, lops down to seventy, climbs to eighty-five and back to sixty-five. Consistency is the goal, and consistency is built on perfectly ordered nerves that can stand the plug of the game.

Steadiness the Thing

I remember how they brought this to my attention at the second club shoot I attended. Oh, yes, I attended steadily after that first experience. Why? I don't know. It got into my blood—that's all. Every once in a while I was getting as good a shot as the best of them. That may have been one reason. But to get back. One of the boys was going at a great rate. He was powdering them to dust, sure, quick, even. I remarked that there was a man who *could shoot*. One of the other boys—the captain of the team—shook his head.

"Oh, no," he said. "He's unreliable. You can't depend on him. If he'd shoot that way all the time, though, he'd make the team."

So this man hadn't even made the team. I recall thinking at the time that I would like to see the captain shoot as well, but before the day was over I saw his remark had not been prompted by jealousy. My man "who could shoot" toppled in the third string, and tallied twelve in the last. I think that was my first lesson in the necessity of steadiness.

About the sixth week I'd been shooting and had gained a degree of proficiency that enabled me to cop an average of something like fifteen out of twenty-

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five there was an open shoot at a club in a neighboring town. Just for the experience and because I loved the game, I went over.

The first string gave me a total of nine. This was inexcusable. I attributed it to a certain amount of nervousness over shooting at a strange club. I scored eleven in the second and twelve in the third. By this time I was badly annoyed. The prizes were given, not for high gun, but for the best string of fifty, shooters allowed to try as many as they pleased. In disgust I stayed out of the next event. Someone suggested that I try another gun, but I demurred. I had been able to get fifteen consistently with my own double-barrel field gun, and I could not see how changing guns would aid me.

Then the management ran in an event at ten pair of doubles as a change from the regular program. On the second shot the extractor in my gun broke, and rather than hold up the squad I passed it down, and grabbed the first gun anyone handed me. It was an old rusty double-barrel with a very straight stock. It was so rusty that it was practically red all over. The chambers were so full of crust that I had all I could do to drive the shells in, and was obliged to use a ramrod to get them out. But though I stood there working with a rod as though I were shooting an old muzzle-loader, I finished that string of doubles by breaking five pair straight.

Somehow I couldn't seem to miss with that old gun. It seemed always to be on the birds as I swung it up. After the event I hunted up the owner and got his permission to shoot it in the next regular event at single targets. After I had smashed the tenth bird I knew I was right at last. I finished with twenty-three. The next event netted me twenty-two, still with the rusty cannon, and I came out with a total of forty-five, which gave me second prize on the day.

Now, I defy anybody to realize what that meant to me. To go suddenly from ten to twenty-three and to hold the pace through another string is the dawning of a wonderland of ecstasy for the trap-shooter. I went back to our club all puffed up, and the following week shot right back in my twelve to fifteen average again, using my own gun. Then I knew that something was the trouble with that gun.

I borrowed a straight single-barrel trap arm, and went as high as twenty. I had discovered something—that you need a different gun for trap work from the one you use for field shooting. The boys had told me before, but I had thought I knew. I set out to hunt up a new gun, and found it—a moderate-priced repeater with a drop of two inches at the heel. With this gun I began to improve steadily until with fair consistency I was shooting around 75 per cent. Formerly I had talked of the number of birds I got; now, as do experienced trap men, I spoke of the number I dropped. That straight gun—a gun that fitted me perfectly for trap-shooting—had caused a complete transition of view-point. In short, I had reached the point where I began to lose birds on account of nerves, and not because I was not shooting anywhere near them.

The Gun That Fitted

With the acquisition of the gun that fitted, I gradually got over the flinching habit, though it occasionally attacked me at unexpected moments. I had joined the great army of trap-shooters who attain the skill that goes with 75 to 80 per cent, and for lack of some peculiar quality (I am inclined to think something in their make-up psychologically) never get any better. There are hundreds of men who will average consistently above 80, a fair number who will shoot 90, and a very few who will go 95 or higher.

How to shoot 95 per cent! I once asked the question of Jack Fanning, one of the old-time professionals and a great coach.

"Why," said he, "just keep on break-in' 'em."

And I was forever learning something new about the game. That's one of the beauties of it, there are so many little things that do not appear at first, but which crop out little by little and lend zest to the study. One day as I was

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plugging away on the platform, one of the members of our shooting team, and he is one of the best shots in the East, came up and stood behind me. When the squad was through firing he said: "Why don't you wear a shell box instead of carrying your cartridges in your jacket pockets. I'd wear a heavy shell bag and fill it full of shells—more than you need for the event."

I failed to gather the drift of his advice until he explained.

"You see," he said, "you want to swing from the waist—pivot from the hips, with your face never leaving the comb of the stock, and your arms a part of the gun. As sure as you swing with your arms, or from your shoulders, scattery like, you'll never do any good. The heavy load of shells at your waist keeps this subconsciously before you, lets you know that you've got a waist, and you swing from it."

This was one of a thousand similar lessons that I had never dreamed were necessary, for it is only the outsider who cherishes the notion that trap-shooting is merely a matter of calling pull and then shooting at a clay disc scaled into space.

I also discovered that the best trap-shots shoot with both eyes wide open, as I believe the best field shots also do. A clay bird is a small object, and when the background is poor one needs all the eyes he has to find it with the quickness which is absolutely necessary to success at the traps.

After a year of faithful practice—practice that I confess had been somewhat expensive, but well worth the price—I have failed to climb above the 75 per cent class, Why? I don't know. Nor do I believe any of the other hundreds of men who shoot consistently near 80 year after year know. As is the golfer who is consistently under 90, but who rarely, if ever, goes under 80, so is the trap shot who rarely, if ever, breaks 90.

But the game? Why, the greatest in the world. Thrill, excitement, nerve! Back behind the churn of the day's work I can hear whispering always in my ears the sharp, snappy song of it—"Pull, bang, puff."

There are only two men in the United States who have ever tried to play the ancient game of hawking. One of them is Dr. Edward Breck, who tells of his experiments with Lady Clara Vere de Vere in the March OUTING

A NECKTIE TUMP-LINE

A GOOD, stout, three-foot necktie is a mighty handy thing to wear into the woods. Not only does it enhance your personal beauty and serve as a sort of connecting link to civilization but it is also serviceable as a tump-line, dog-leash, game carrier, pack-rope, boat-painter, belt, emergency bandage, gun-sling, and snow-shoe thong. Two neckties and two bandannas make a fairly good line for tracking the canoe through moderately white water. Its usefulness is limited only by the ingenuity of its wearer and the number of emergencies he may encounter. Being an habitual article of apparel, it is less likely to be left in camp than a coil of rope or hank of twine.

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BLANKET WOODCRAFT

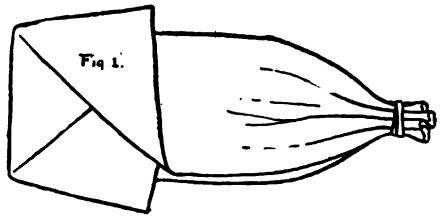
By LAURENCE V. COLEMAN

BROTHER sportsman, did you ever roll up in your blanket and creep into a cosy lean-to pitched before a heap of red coals? And then did you get cold feet, literally, and hot under the collar, figuratively, because said blanket would not stay rolled? And the next season did you invest altogether too many hard-earned dollars in a snug sleeping-bag? And did your feet and your collar bones get sore from lugging the heavy luxury? If you fall in this class, here are two solutions to your problem.

Trick number one is simple but effective. If obliged to start on a trip into the woods at short notice and with only an ordinary blanket available, take with you a short strap or cord, and scorn all offers of blanket pins. When you pick your camping site for the night, spend about two minutes as follows:

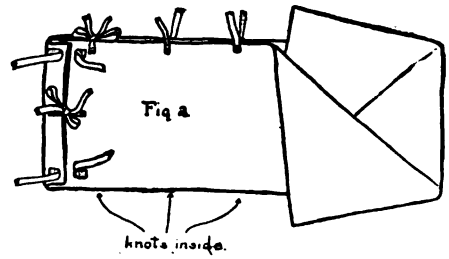
Fold the blanket lengthwise into thirds. Gather up the foot into a bunch and wind it tightly with the strap or cord, as the case may be. A rawhide shoe-lace will also fill the bill admirably. Place the blanket, so arranged, on your bed of balsam boughs and lap back the two corners at the head end (Fig. 1).

When turning-in time comes, crawl into your blanket as you would into a



sleeping-bag, and rest assured—your feet will stay warm.

Trick number two is a modification of the foregoing, which requires a little needle-work, but which will fully repay you for the trouble. Fold your army blanket into thirds just as before, and sew several nine-inch lengths of tape along both sides and one end at intervals of perhaps a foot (Fig. 2). The tapes should be in pairs, so that the ends may be tied together, transforming the



blanket into a bag with two thicknesses above, and one beneath. The tapes should extend only half of the way along the sides of the bag from the foot, as the upper part of the blanket may be pulled tightly about the shoulders and neck of the sleeper, and will stay in place of itself. At the foot the tapes should be fastened a few inches from the margin of the blanket, allowing the end of the bag to be folded over and tied in this position, precluding the possibility of a "leak" at the foot.

If you do not carry a poncho, a sheet of waterproof canvas may be sewed to the underside of the bag, making it double thickness beneath, and keeping out ground moisture.

I have used this device under all sorts of weather conditions and can vouch for it. A great advantage of either of the above systems is that the blanket may always be flattened out to dry and air, or may be put to a score of other desirable uses.

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THE BORROWED GUN

By A. D. JAMES

Why an Earnest Nimrod Was Able to Hit Pretty Nearly Everything Except What He Shot At

THIS is a yarn about a New Year's hunt in Florida, and if you want to have me arrested on the strength of the facts herein contained, you may write to Sheriff Kirkwood at Orlando, Orange County, Florida, and likely enough he'll put me in the little brick jail, just back of the band-stand, on Orange Avenue, where I can feast my soul for a spell on the spectacle of waving date palms sheltering stone benches on which the tourists sit and compose literature on postal cards for the folks shivering in the snows at home.

I am no sportsman. If I were this story would sear my soul. I'm just one of those fellows who, having been advised by the hardware dealer what size shot kills squirrels, and what kills bear, and that smokeless powder is preferable on damp days, borrow a gun of a friend, put on a pair of leggings handed down from other days, and go out and bag optimism.

As a sportsman I'm the young dilettante who reads the immortal Ella Wheeler, and who doesn't know Herbert Spencer from Czolgoz. All of which you needn't be told in advance, but can glean with your little sickle if you will read this brief chapter from my expurgated life.

It happened down in Orange County, Florida, of a New Year's Day, which is a propitious time to go hunting; you can make so many new resolves. You can swear unto yourself that you will lead 'em farther henceforth if the sky falls.

Picture to yourself, reader, a drear and cheerless scene; a white-washed dwelling, with no ornament but a sleeping porch, reposing on the border of a series of sedge fields on the one hand and a scope of Florida flat woods on the other. Flatwoods in Florida are like meadows in Jersey. They are standard in landscape, Not to know the one argues that you are woefully ignorant of such appendages of knowledge as the Board Walk Smile, the Gallinipper nip, and the immortal Woodrow. And not to know the other indicates to the reflective that your education has been neglected on the side of the homely in nature.

The flatwoods of Florida are woods of pine dispersed over interminable stretches of flat land, and they appeal to the soul of vision as the conversation of a prohibitionist appeals to the soul of the appetite.

This whitewashed dwelling of mine commanded a view of sedge fields to the north, Florida being a land of beautiful distances. My predecessor had planted a vineyard in the place where the lawn belonged, the soil of which was enamored of weeds. To the west, across another sedge field, the expanse of which was broken by several persimmon trees, an orange grove was set in the landscape like an oasis on Sahara, or a bunch of violets in a stubble field.

Beyond the vineyard was a land-tired section of a cracker farm, which contained a quarter-acre planted down to turnip greens. And right here on the border of this turnip patch now pause, reader, with me, and imagine to yourself that it is the waning afternoon of December thirty-first, just six hours prior to the putting on of your brand-new moral coat of paint. The sun is sinking into a vermilion field of cloud just over that aforementioned orange grove, and there are ominous and gloomy shadows falling and lengthening in the flatwoods. In a very few minutes this good day will have

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kissed its hand to you, the twilight will have winked at you, and out there over that self-same orange grove the bright rim of a new moon will show in the sky.

We approach that green turnip patch and we see, trotting between the rows of frilled leaves, some twenty quail. In the dusk we can just distinguish that they are quail. We, you and I, reader, look backward toward the house and comprehend the distance in enthusiastic strides. We whip a glance toward the west, then we blink at the quail that are right merrily picking and pecking and executing their little turkey trot in apparent glee.

We know it is too late to get that gun we borrowed for the morrow. Before we could get back in shooting range darkness would be upon us. Darkness falls in Florida with the dispatch of a third act curtain, when the star is out of sorts.

All Ready for the New Year

But say, that picture gives zest to the evening. We have marked the birds, and we know well enough, laymen though we are, that they will not travel far before daylight. The New Year will open auspiciously for us.

Now, let us degenerate into the first person. I could never drag you, reader, learned as you probably are in turnip-patch philosophy and the intricacies of the chase, into such a piece of business as this. This is my story, my confession, and I write it that I may ease my soul and make pretend it is a joke for the sake of my conscience.

I got up the next morning when the first glimmering of this good year, 1913, was showing through the pines, and I dressed with that enthusiasm and lack of care of such details as the buttoning of buttons, which you probably can sense from a similar experience.

Standing in the corner of the kitchen, behind the door, was a gun which I had borrowed the morning before from a fellow who had come from Montana and bought a forty out in this wilderness, on which he proposed to raise truck and make a fortune. He was a kind-hearted fellow, but neither his three-room unpainted bungalow, nor his forty-acre farm, nor the boat he used upon the lake, nor the mule he drove to town for rations was of modern aspect. His fortune was before him, some degrees removed, and his gun was of the same pattern as his other possessions, which fact, in my unbridled enthusiasm, I did not take into consideration at all; indeed, if I had I should have put this yarn in the closet with the other skeletons.

I filled my pockets with shells, grabbed the borrowed weapon, and treked down the vineyard path. Every object was soaked with dew, which in Florida is heavy, because the rains are light and Nature has a habit of striking a balance. A heavy mist overspread the land, breaking and lifting here and there, revealing the landscape in spots. The light was pale and wan, and the air, while chill, had the hint in it of coming warmth.

I went through my gate, lifting back the wet honeysuckle that entwined the posts, and crossed the road that intervened between the vineyard and the turnip patch. The patch was bordered by a post and rail fence, and I stopped midway of the road and peered cautiously between the rails.

A number of quail that had been feeding in the patch had already seen me, and were scurrying for cover in the form of a brier patch which hugged in close and thick around the turnips. Now, friends, they're there. That much we know. Our anxiety is set at rest. We have the comfort of knowing that we will at least get a shot. Let us take our time. With smoke beginning to emerge from the family chimney in the gray distance beyond the vineyard, which means flannel cakes and syrup;—with a clear, new day bursting into being over this wilderness far removed from the turmoil of man, and with quail in the bush, and rabbits, too, very likely, there is honey here; let us glean it.

There before us, set on the edge of this oft-writ turnip patch, is an old, dilapidated barn. Set around it are pear trees, and, merely as an aside, the old building is filled with sweet potatoes. A field clustered with brown briers extends away to the northward from this barn, containing the solitary semi-tropic touch of a lone palmetto tree rising midway of the flat expanse. Fringing and environ-

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ing the whole scene are the tall, straight, solemn Florida pines, draped with gray moss. To the tops of these now the morning mists have risen, veiling them with a mysterious film of beauty.

But let's cut this lit'ra'toor. Fancy me slipping stealthily around that old barn, expecting on the far side of it to jump the birds. I crept to the corner and turned it with the caution of a Broadway cop maneuvering for a morning elixir. I look fleetingly about expecting the quail to buzz out of those briers like bumble bees. But there was never a bumble. Suddenly I saw a bird darting through the cover; then another, and another. The briers were alive with them.

If they had only got up I would possibly have died an honest man. But they didn't. They rustled around in that cover like hunted rats, and bunched up, all in plain view, under what they probably conceived to be a piece of dense cover.

Now, reader, let me ask you confidentially, have you ever been tempted? Did Satan ever come up in the wilderness where you were and offer you a batch of game, when you had been choking down wild locusts for a whole year?

Let us stand off and view those quail together. You know as well as I do how they looked. You know all about the brainstorm I was experiencing. You know how the gun suddenly got life into it, and just would creep up to the shoulder. Now keep down your temper and sit tight, and if you never did any wrong in your whole life heave a stone at me with all your might.

That borrowed gun slipped to my shoulder like a piece of well-greased machinery falling into place. The batch of brown feathers flashed over the sight, and I blazed away with an unholy load of number eight shot. And as soon as the load exploded, I threw in another shell expecting to salve my conscience with an honest wing shot.

Now prepare for the worst, the blackest record of crime. I was positively struck cold when not a bird flew. A hazy idea was in my head that I only wanted to kill a few. I certainly had not intended to annihilate the covey. I whipped a glance about me to see if anyone had seen the sin I had committed, and then dashed forward to pick up the slaughtered.

The first jump I made, I saw more birds scurrying through the cover. I thought this strange, and probably you will, too, but it happened. These suddenly bunched up as the others had done, and, the thirst full upon me, I raised and fired at these. Then the same tragedy was enacted a third time. But at the third shot about a dozen birds rose and flew away.

Where Were the Quail?

My blood was now thoroughly up. I had the quail fever as burning hot as man ever had the buck fever, or the scarlet rash. My brain buzzed as with quinine. Quickly I ran to the spot where I had taken the first aim. My imagination pictured vividly the dead birds lying scattered about. I could FEEL the soft warmth of them as I picked them up. I reached the spot. I peered through the briers to the ground. Everything was brown around me. I could not distinguish clearly at first. I looked cautiously, carefully, thoroughly, as cats peer for their prey, as doctors search for germs. Let me say it softly; there was not a feather.

No nightmare-haunted sleeper that ever fell over a cliff and awoke was more surprised and shocked than I. It was as a trick of an alchemist. Amazed, I searched for yards around the spot. Still not a bird—not a sign of a bird.

Nor did a search in the other two places where I had fired reveal more. In vain I retraced my steps to the points whence I fired, locating them readily by the empty shells that were near, in an endeavor to make absolutely sure of the location of the birds at the time I fired. I walked around that dew-hung brier patch for three-quarters of an hour, like a man searching for his reason. Then, in utter disgust, but with a haunting sense of wonder in my brain, I started homeward for some flannel cakes, my appetite for which had been materially curtailed.

Two days went by, and that borrowed

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gun stood behind the kitchen door. I had lost even that interest in it which should have prompted its return. The second evening at sundown I heard a shot in the yard, and later heard the report from my father that he had fired at a sitting rabbit in the vineyard and had missed clean. And he had a record in Virginia with a gun and carried six bird-shot in his left ear.

Now, suspicion is a quality of protection for the human mind. I picked up that gun and looked at it with an eye which had become exceedingly critical. I sighted down the barrel. Then I saw a light.

"Come out here into the yard," I said to my father. "I have a hunch why you missed that sitting rabbit."

We went out and put up a big paper target, using a rack of cordwood as a background. I aimed at the penciled center of the target deliberately, and when the gun went off an old rooster, that had seen many winters and that was walking some twenty feet to the left of the wood, suddenly fell over as in a fit.

"Why in blazes didn't you shoot at the target?" queried my father with asperity.

"I did," said I, running over to pick up the fowl.

Then my father looked through the barrel of that borrowed gun and he, too, saw a light.

They play Rugby football on the Pacific Coast and like it. Why? Arthur A. Goldsmith answers this question in the March OUTING

TIMELY TIPS FOR EMERGENCY OUTFITTING

WHILE there may be a disposition to argue whether gauntlet gloves are justified by the demands of wilderness living or merely excusable on the ground of individual eccentricity, the fact remains that they are fine for handling drinking water. By folding the "hand" part up against the "cuff," the latter is converted into a drinking cup which has it over the conventional hat-rim and birch-bark makeshifts like the proverbial tent.

IF a little care and discretion is used in deciding the size and shape of the "panels" into which the map, or maps, is cut preparatory to mounting on cheese-cloth an ordinary leather bill-fold or, better, a tackle-book makes a very satisfactory map-case for the trail. The latter, with its separate pockets, permits the assortment and indexing of maps for quick reference. In that way you can usually find the one you want.

SURGEON'S adhesive tape, already pretty well established in the canoeist's outfit, is highly recommended for emergency repairs on canvas and bark canoes. It is averred by those who have been forced to try it that, so long as the tape holds out, it is possible to cover any tear in the canoe's skin water-tight by laying on this sticky fabric and "ironing" it fast with a hot knife, spoon, or stone.

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ON THE DECK OF THE DOG-WAGON

By HAMILTON M. LAING

A Tale of Tests of Canine Speed and Cunning Against the Hares and Foxes of Western Canada

ILLUSTRATED WITH PHOTOGRAPHS BY THE AUTHOR

WHEN I wrote to my new friend during the summer inquiring about the prospect of securing a hunt with him and the probability of getting photos of his running dogs in action, he had replied with true Western hospitality and optimism. Come right along—ran the import of his message—stay a week, a month, all winter. Pictures? Why the dogs often chased the jack-rabbits around the dog-wagon; foxes had taken refuge under it; and when a wolf was overhauled and had his back up, there was always an opportunity to get in close at the death. Come in October, as the dogs could not be allowed to run till the fields were in shock or threshed; and also, the foxes and wolves then would be prime. So it was decided, and one day early in October I transported myself and photographic outfit, by way of a five hours' run by train, to his farm—a goodly slice of fertile Manitoba acreage—and soon was getting acquainted with the pack.

They were a likely and lively family of canines that loped out of the big barn at the stentorian "Come dogs!" of their master, Ned (though he is a grandfather, I shall have to address him as did all others we later met within a radius of twenty miles). There were nine of them, three old dogs, Siss, Fritz, and Pat, of Greyhound blood, and four white pups of cross-bred Grey and Russian Wolfhound, one or two of which at six months already were taller than their elders. Then there was Buck, the black and tan sad-faced Foxhound, and last but by no means least, Sport, the Collie. And though I did not know much about running dogs, I felt that if I had been a fox or hare or coyote anywhere in that neighborhood, I would have holed-up till the dead of night, then flown at my best pace into the next county.

The Westerner never allows sentiment to interfere with the composition of his pack. There is none of the stiff-starched red-tapism of the Old Country coursing about the sport as he sees it. The Manitoban wants a pack of dogs that can catch and kill wolves and foxes, and the jack-rabbits—here they are not real jacks,

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but prairie hares—are picked up as a side relish. So he has developed a type of dog well suited to this work and play. Originally Greyhounds or Staghounds were introduced, but these breeds were crossed and sometimes mixed with another strain, till to-day the ancestral history of many valuable dogs is impossible. Thus in the pack at hand, the pups in their lankiness and feathery tails and hips showed their Russian blood, the red Greyhounds in their bulging muscles and thick, strong loins showed a fighting strain; and Siss, the mother of the pups, showed in her broad head a trace of something other than running stock. The right of the Collie and Foxhound to a place of honor in the pack I took as a matter of course.

Where Grouse Were Wise

As we were not to hunt with the dogs till next day, I took Ned's advice and went hunting for grouse. It was early afternoon and I thought that I knew exactly where to look for them and turned into the first green, soddy hollow in the wheat-field. Instantly there was a whirr and a whiz, then another rush as a dozen pinnated chaps burst up and away from beside me. But I killed the first bird, had time for a second, and as I picked up the fine fellows I felt right there that if Ned and his dogs did not pan out according to expectations, the grouse-shooting would. But during the remainder of the afternoon I had another thought come to me. I walked miles, scouted about another hollow in the stubble, invaded the pastures, skirmished about the little willow thickets, and all to no purpose. Yet I know that there were hundreds of grouse in the neighborhood, for Ned had said so, and that settled it.

Then I had an inspiration and attacked the summer-fallows, now green with an unusually heavy coat of fall growth. Results immediately. All the grouse in the neighborhood were holding forth here and soon I was routing them in scores and fifties. But like most October birds they were wise in the ways of man and flushed wild; and more and more as I helplessly watched them skim away unscathed, the wisdom of a late open season on these birds was brought home to me. In September these same birds would have flushed close; now they were able to protect themselves very well indeed. Only two of them gave me a close shot during the remainder of the day. One of these artfully burst away behind a willow-clump and so escaped my load of sixes; the other flushed on my side of it and I vengefully cut him down. Thus my blood lust was appeased, for I shall always contend that it is a great deal more satisfying to see a great many wild birds and get a few, than to find but a few foolish ones and get them all.

We did not make a very early morning start. Ned maintained that it was not necessary, that he could get closer to the foxes during the warmer part of the day than in the morning or evening. His explanation was that early and late they were stirring abroad feeding and at sight of the dogs would hide or hole-up, whereas at mid-day they slept lazily in sheltered spots and could be surprised in their naps. So with a strong team hitched to the dog-wagon we presently set off across the fields to put fox theories to the test.

To one accustomed to fox-hunting of the "Down-East" sort, our kind of country would appear impossible. A vast stretch of open prairie, slightly rolling, with a few sloughs at long intervals, sometimes surrounded by willow thickets, would seem but poor cover for Reynard. But for old *Vulpes Regalis,* the big, handsome prairie fox, such territory is ideal, so much so that my companion informed me that he could take twenty-five a winter and not appreciably diminish the supply in the next season.

Very soon I was to learn the why and wherefore of the pack and the right of the Collie and the Foxhound to an honored place among their running kindred. For in the cranium of this sober Collie that rambled with steady trot, trot, trot back and forth, now nosing about a shock for a scent—he had an excellent nose—now turning aside to invade some likely hollow, or pausing on a knoll with high head to reconnoiter, was centered the genius of the pack. He, ap-

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parently the least significant of them all, was the leader. The runners watched him, looked up to him; they were uneasy when he was out of sight, nor rested till they found him. He worked with the Foxhound, but his keen brain solved scent problems in a moment that kept the denser Buck puzzling for several minutes.

Often the Foxhound would be unraveling something in grassy hollow, his tail going round and round with the energy of a several horse-power windmill, and Sport would run over to him, sniff about, stop, look around, then with a sedate, "You're wasting your time, Old Top" trot out of the hollow. And in such cases there was no game in that hollow. Though at times a little lame—he had been caught in a trap one cold winter night and had a front paw frozen—he seemed absolutely tireless—and later I was to learn that he scorned to ride in the wagon like the hounds, and yet arrived at home at night apparently the freshest dog in the hunt. To the pack, he seemed invaluable, for he possessed a most uncanny amount of knowledge of everything that ran or flew upon the prairie; the gray hairs mantling his aging brows were each rooted in doggy wisdom.

Getting the Game

The Foxhound's work, like the Collie's, was to scout around and start up the game; but though seemingly inferior to the Collie in brain power, he also showed that he was adjustable and had changed his ways to suit the game he was playing. There was little of that blind stick-to-it-iveness of his keen-scented race in him now. He would watch the direction taken by the team, then start out and work the country ahead and to right and left; but he would not follow a clue more than a quarter of a mile unless backed by his master and the pack. He had learned that on each hunt a certain course had to be followed and that his services were not of much use to the pack except when he was backed at close range by the runners.

"Go on dogs!"

A tremendous command from Ned, an "Owgh! owgh!" from the throaty Buck, a sharp yelp from the Collie, and they were off. The Foxhound had routed the jack and for the first hundred yards he had the chase all to himself. But after him came the three old dogs, trailed by the white pups, and they crept up on him and passed him as though he had been trotting, and swept on in that long, terrible lope that seemed to take them over the earth without touching it. Before them fled the hare—he had been merely running at first, now he was flying—low on the ground, a whitish streak easily followed on the dark field.

He had quit the stubble—for a hare cannot run in it—and immediately taken to the plowed summer-fallow where the softer footing gave him an advantage over his heavier foes. But it was a meager advantage. Fresh and strong in their first run of the day, the two red Greys, like avenging fiends, ate up his lead. Fritz, ahead, struck and missed, but turned him, and the white followers cut across the circle and for a moment caught up with the hunt.

The old man was on his feet; sixty years were cast aside, and his heart was a boy's again. "Look! Look! See that! Fritz, you old rascal, you! See those pups! See the little white bitch—wait till next year and those young lads will show you how to run. They've got him. No! See!"

I saw it all well enough and I think I groaned aloud, for my sympathy was all with the fear-stricken fugitive in his unequal fight; and I think I grunted a little prayer for him: "Run! you poor little beggar, run! And may the gods lend a dozen winged sandals to your heels! Run! Run! Bravo!"

But again that red fiend overtook him, struck for him, missed him by an inch and turned him fairly among the other dogs. He made a tremendous leap in the air, apparently catapulted right over one foe and landed fairly in the teeth of another. He was plucked from the air as a ballplayer pulls down a fly, and it was over. The death scene was short; but while my comrade chuckled in glee, I realized right there that my point of view was wrong somehow and that I could never be an enthusiast at the

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game. And while I realize that it was impolite of me, I think I must have intimated something of the sort, for I recall that Ned assured me that the rabbits liked it—as proof: they wouldn't make such good runs, if they didn't—that it was an honor for a jack to be picked up by such a fine pack of dogs, and also that rabbits made good dog-meat. Whereupon we set out to find Br'er Fox, or what I now felt was more likely, another jack-hare.

We did not find this red brother of the white-tipped brush, but four more jacks were started and picked up. Also we flushed a large number of grouse and as I carried both gun and camera primed for action, I got several shots. The most interesting part of the shooting was watching the adaptability of Sport. Though not trained to the gun, he took to it at once and was ably seconded by the Foxhound. Usually they flushed the birds too far from me, but that was scarcely all their fault, for the game was very wild, and they took a keen delight in finding them for me in the grass. In the two or three cases that I dropped a bird, I had to execute a hasty sprint to rescue it, for Sport had been trained in the firm of Shake and Maul, and though he was sure, he was a mighty rough retriever.

We did not start out next day till the afternoon. The dogs plainly were tired after their previous strenuous day and Ned prescribed a half holiday. This time we took a new direction and hunted fresh territory; somehow from what I had come to know of Ned, I felt that he perhaps might be playing a trump card, but certainly not his highest. He knew of better territory I was sure; but I felt that if my host was in no hurry to reach this foxy Canaan that was somewhere at hand, then I need not be. And indeed these days as we wandered about the plainland fields were very pleasant ones.

Life and interest were there at all times—the pinnated grouse in their big migrating flocks, the scattered coveys of sharp-tailed cousins clinging to the willow-clumps, the Lapland longspur armies swirling about the fields, the first snowflakes, the south-going snow goose battalion crying overhead, the rough-legged hawk hunting over the mowed hay bottom, the first butcher bird (Northern shrike) of the season chasing with deadly purpose a little sparrow about a willow thicket, the yellow "gophers" (Richardson's ground squirrel) occasionally perked up on a mound—most of them had retired weeks earlier—the long-tailed weasel scurrying for a hole—life in abundance, except Br'er Foxes.

The country we traversed in the afternoon had several little scrubby hollows, and once as we passed one of these Buck and Sport suddenly swirled to the right and dashed off with heads high in the air, and were immediately followed by the hounds. They all disappeared in the willow strip and Ned pulled up the team. Then there rose a scurry and scuffle in the willows and the "aagh! aagh!" of open-mouthed dogs in action. Next came a yell of pain from one of the dogs and my comrade shouted "Badger!" and with wondrous celerity for a grandfather climbed over the wheel. But I beat him there—for he had to tie the horses—and with the camera primed for Badger I dashed around the willows—into a most violent dose of skunk! The air was hazy, thick, for a big prairie *Mephitis* had been done to death and as usual with his kind, he had died valiantly.

Sick of the Job

Half a dozen hounds were gagging and coughing and rubbing their faces on the ground, shedding real tears the while. One of them had a nasty cut across his face where Mephitis had brought his forward turret into action and bitten hard. But Sport now held the center of the stage. He was getting in his work on the prostrate foe—work usually denied to him where the others so much swifter beat him to the kill. Though the victim probably was dead before he had a chance to lay mouth on it, he shook it till he was out of breath. Then he lay on it and rested, after which he shook it again, and took breath and began at the beginning. "A-r-r-r-gh!" he seemed to say, "You stinking beast! killing's too good for you; I'll shake you to bits, you tough! fat! smelly!—a-r-r-r-rgh!" And

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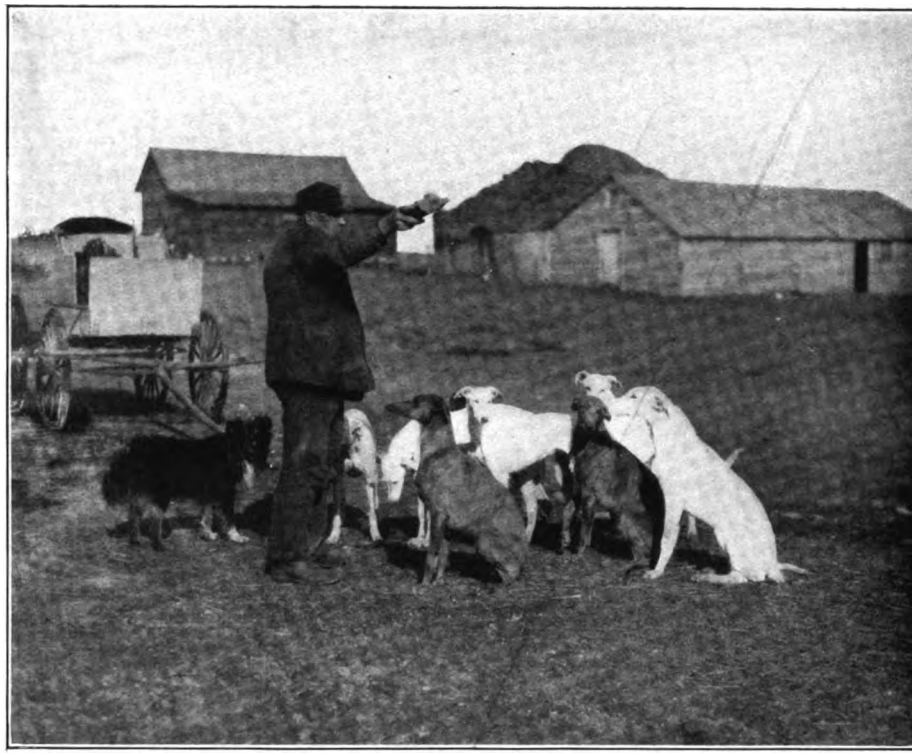

THEY WERE A LIKELY FAMILY OF CANINES. THE DOG-WAGON ON LEFT

I was told that he never worried a fox or wolf or rabbit in such manner.

The commander of the expedition said that water was good medicine for the poor dogs after such a trying adventure, so we headed for the nearest slough. On the way there we jumped a jack. This hare was both wise and fortunate, the former that he ran up wind, the latter that he was able to stay there. Also he escaped. Though Ned said that such a fumigating did not worry the dogs much, it was plain that they did not run well. Doubtless atmospheric conditions were still so abnormal that they saw more than one hare and chased the wrong one. Certain it is they lost him.

Toward evening we started another jack that was not so fortunate. He was routed from the grass beside the trail and darted for the summer-fallow immediately, but the footing was fairly hard as it had been plowed some time, and the dogs quickly pulled up on him. Soon, however, their previous running began to tell on them, and the three old dogs were strung out well apart, with the fugitive increasing a good lead. The chase led all over the field—there was a quarter section in plowing—and Jack, perhaps wisely, refused to leave it. So they circled the entire quarter, the red Fritz now leading by far, but still slowly losing a little ground at every lope.

Then, as I shouted exultantly for the winner, I saw the rear dogs cut across several hundred yards and take up the chase again with fresh vim. It had become a relay race. Fritz, cut off, now stopped on a knoll and when the hunt came his way again he dashed off once more. Even yet Johnny held his own. Ned assured me that the running power of hares varied as vastly as that of men, and this jack seemed a veritable Shrubb at the game. But there could be but one ending to such a race, and at last there was a halt and three dogs stood over a whitish mound on the side of the knoll. Jack had taken to a badger-hole.

The pack refused to come away at Ned's signal (the waving of his cap), so

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we went over to them. When we arrived the hounds were standing around panting, and Sport and Buck were taking turns at digging in the hole. While the old man was looking for a stick, I gently but firmly tramped upon the tail-end portion of the industrious Buck, and when the too-willing Collie dashed into the breach I trampled the sides of the hole in upon him—two good shovelfuls. He jerked out and looked up at me with "Fool! Blunderer! What do you mean?" written plain in his loam-coated face. But the commander caught me in the act, and he came and reached down and pawed and scraped and thrust his arm down into the tunnel—said arm having somewhat the proportions of a corner-post—till he declared that he could feel fur and brought up a handful of evidence.

Then I came out into the open and pleaded and fought for my protégé. I told him that that hare had earned his freedom, that he had beaten the best dogs in the country—I dwelt on this—and deserved to live, that to toss him out to the dogs would be to antedate by five thousand years the sporting ideals of the Ice Age; I told him he was worse than a cave man, and a great many more things in one breath. Whereupon he desisted after a little; but I felt that he was sparing my feelings, not the jack—now I know that he did not intend to do it at all, and was enjoying himself at my expense—and so we drove off homeward and left him. As the reluctant pack turned to follow us I said, "Think of the poor beggar down there half-buried; how will he get out?" and Ned said, "Tut! Think of the poor dogs!"

SOME GOOD LOOKING PLACES FOR WOLVES TO BE

Two days of wet weather now intervened to put a stop to hunting, but the rest was needed by the dogs, and Ned assured me that the next time we went afield we would start a fox. When we set out finally we took a new course more northerly than before, and within an hour as we traversed a long strip of weed-grown derelict crop-land where a few grouse were flushing wildly, there came a yell from Ned, a scurrying of dogs, and a little cloud of yellow-red floated through the weeds on the knoll. Br'er Fox at last! He came up in view on the second rise, stopped with that sudden swirl back of his famous race, saw what was coming, and dodged out of sight again.

The pack went over the knolls like hurdlers, then wheeled out upon a pasture flat and stopped in a cluster. They had run scarcely two hundred yards, and on looking at my comrade to seek explanation I could see mystification written

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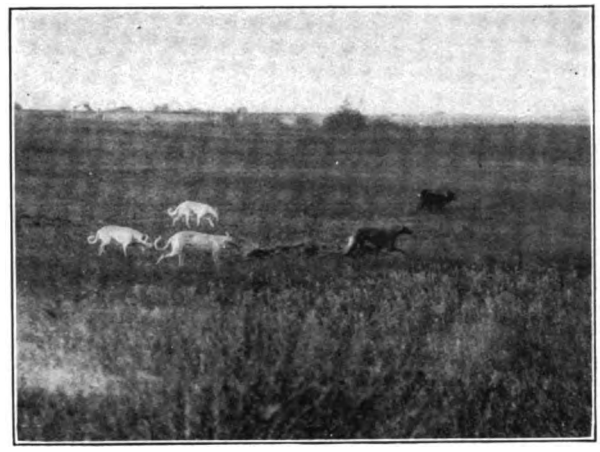
upon every inch of his countenance. When we drove over to the hounds they had a victim all right, but as Ned held him up by the hind foot and shook him there was a rattle and jingle and we were shocked to see a strap and short chain attached to his neck!



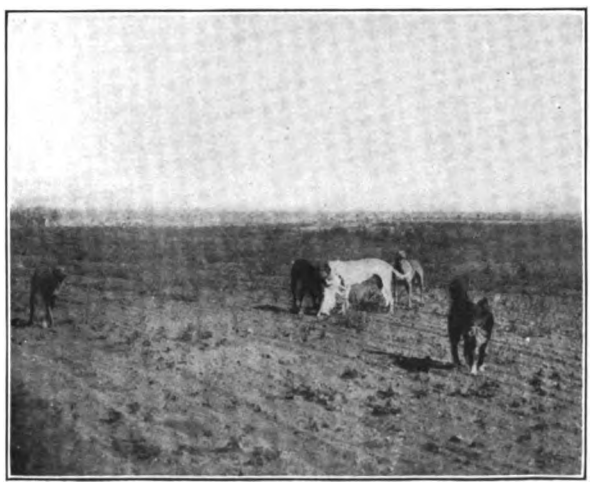
SPORT, THE COLLIE, WAS THE LEADER

It was my innings for a little time, but Ned vowed before heaven that it was not a "plant," that he hadn't tethered the victim there for the occasion, and declared his undying resolve to find a real fox with gumption enough under his skin to make a real run. And he found one before long that qualified partially. Ned saw it first as he always did, for he had a wonderfully keen eye, and he told me to try the glasses. Half a mile distant, standing on the side of a slight rise, was a fine fox watching us. He was very plain in the powerful glasses, but as I handed them to Ned the quarry slipped over the rise and disappeared. We drove to the knoll as quickly as we could, but though Buck took the track and tore around eagerly, his tail awhirl till it formed a veritable halo around his rear, it all came to nothing and that chase ended where it began.

But there is an absurdly hopeful streak in the disposition of every hunter, and we were no exceptions. In fact, we had arrived at a frame of mind wherein we felt that we must now have had all the bad luck and that any new developments must be a break in our favor. So we reeled off a few more miles.

"Look! There!"

Ned clutched my knee and pointed with his eyes. On the top of a black knoll a hundred yards off stood a magnificent fox. He was silhouetted above the horizon, broadside to us, head high, brush asweep, tense, alert—a beautiful animal statue, till in a moment he flipped over the hill-top out of our sight. The dogs did not see him.



THE DEATH SCENE WAS SHORT

"That fellow intends to hide there; he's not going to run," said Ned. "You drive on. If he goes that way you'll meet him. I'll slip up behind the hill with the dogs. He's a fine one!"

So I drove slowly along the road, while Ned, with the dogs at heel, climbed through the fence and stole up the hill. They reached the top and paused a moment, the hounds alert and high-headed, then they dashed away as a red streak popped out of the hollow and skimmed off across the breaking. Br'er Fox had about a hundred yards' start, and

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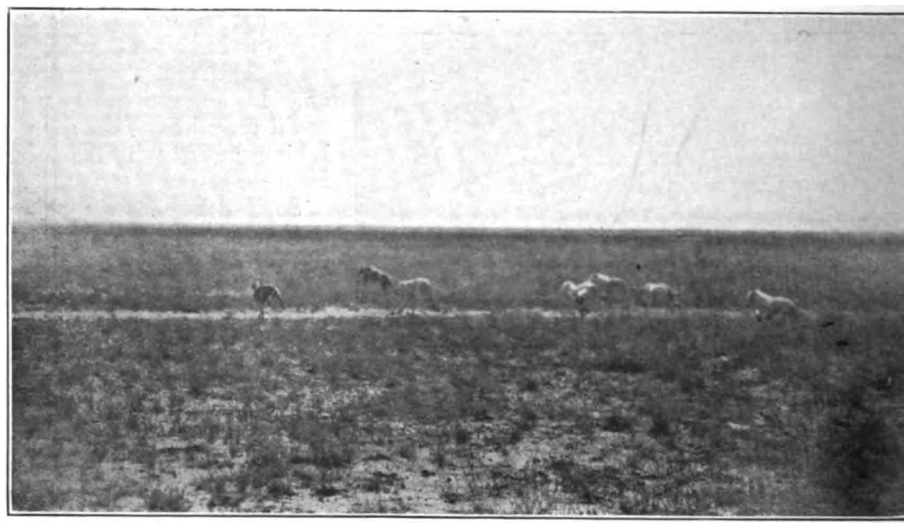
PINNATED GROUSE IN THEIR MIGRATING FLOCKS

it was plain that he didn't want to lose an inch of it. At the end of the first half mile he had still twenty or thirty yards of it, and the red Fritz, first in the pursuit as always, was many lopes ahead of his partner, Pat. At the edge of the breaking was the farm buildings of the owner, and as the chase now led directly for the barn I began to have visions of a strap and chain and suspect that another pet Reynard was hastening home to his hole below the wood-pile.

But my reckoning was wild. Straight to the red barn and around it went fugitive and pursuers, scattering hens and turkeys and two or three calves, back and forth through the wire fence around the garden—the fox got another lease on life here in the way of a few yards more lead on the persistent Fritz—around the wood-pile and the house, where a white-aproned female and several youngsters were a shade more frantic than the hens had been, then off to the field again. It was a case of any port in a storm, but he couldn't find the port; the arrival of the other dogs that cut corners and wouldn't play fair put an end to his game of tag around the buildings. So they swept off again directly away from us, across a big stretch of pasture, and disappeared on the rolling horizon.



THEY WERE OFF—THE THREE OLD DOGS IN THE LEAD

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"Now can a fox run!" said Ned, as, puffing volubly, more from excitement than exhaustion, he climbed in over the wheel. Then he explained that this was probably an old she-fox that, having worked hard all summer raising her cubs, was in fine physical trim—lean and wiry and strong. The young, he said, had not yet attained their full strength and were incapable of such a race, while the old males usually were too fat for sustained speed.

So we set out to find the dogs. And just when we had decided that pack and fox had left the country—barring Sport, who had met us on the road a mile from the start, and, later, one white pup limping a little from a four-inch barbed-wire tear in the skin on the inside of the ham—we came upon them in the grass and snowberry cover by the roadside. It was three miles and a half from the corner where we started. They were all lying, some panting on their bellies, others prostrate at full length on their heaving sides.

Beside Siss, the mother of more than half the pack, lay the fox—she always took formal possession of the kill—and he had died within six feet of a badger-hole haven. Doubtless in a vain attempt to get to earth, he had made his last stand on the knoll, and been seized as he slacked his pace to enter. It proved a vixen, and as Ned held her up for the usual shake and survey, I said, "Poor little devil!" His rejoinder was, "A beauty! Not mauled a bit. But, man! Wasn't that a run!"

The next day was to be a wolf day, and we set out earlier than usual and headed into a new part of the country where it was rougher and wilder. For the first time on our present hunting trip the sun shone brightly and pictures seemed assured. But they did not materialize. It was not Ned's fault. He played his last trump—the ace—and we traversed some of the finest coyote country imaginable. We saw some "mighty good-looking places for wolves to be," and even invaded a field where the owner told us that his boy had shot a very large one from the plow the previous day; but we were unlucky and were unable to start one. The only fox seen during the day sneaked into a deep hole close to our wagon, while the dogs were busily chasing a jack-hare half a mile distant, so, barring the few sharp-tail grouse that came to bag along the ravines, the day was rather barren of game results.

RUN! YOU POOR LITTLE BEGGAR, RUN!

My time was now up and reluctantly I had to leave. But Ned maintains that I must return when I can stay till I beat the weather-man, and get a wolf with his back up; and though on the past hunt I did not note any foxes that showed a disposition to get under the dog-wagon, nor many jacks that circled much in the vicinity of it, I think perhaps I will.

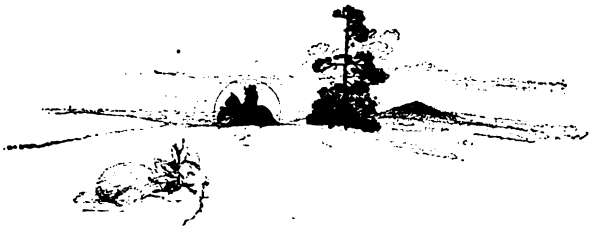

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Photo by J. G. Curtiss

THE TREES BESIDE THE LIMPID LAKE STAND DOUBLE, TREE AND SHADOW

The free paraphrase above is justified by this remarkable photograph of reflection. If it were not for the clouds one guess would be about as good as the other as to which way is up

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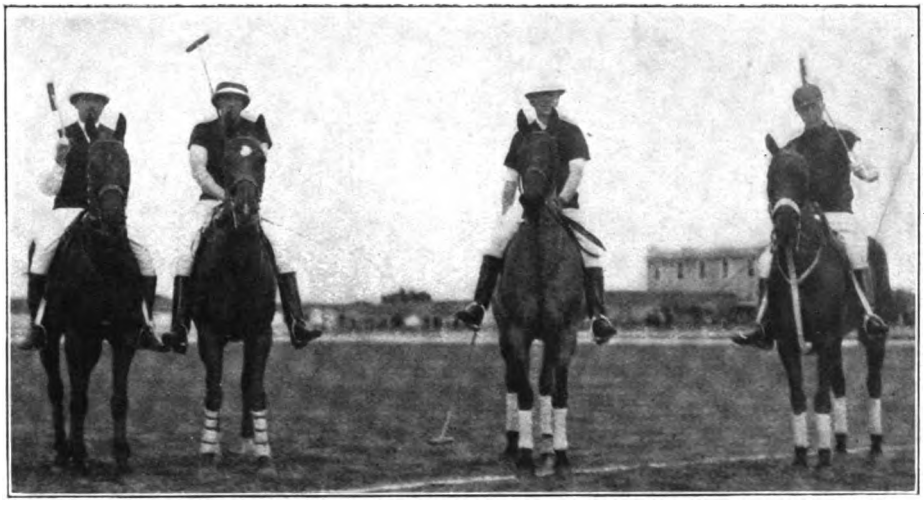

THE SAN MATEO TEAM
From left to right—W. Devereux, H. Breeze, R. Tobin, Tom Driscoll.

POLO ON THE PACIFIC COAST

By ROBERT ORDWAY FOOTE

ILLUSTRATED WITH PHOTOGRAPHS BY HAROLD A. TAYLOR

The Men Who Organized the Sport and the Opportunities It Offers for Winter Play

CALIFORNIA is one of the most enthusiastic polo-playing countries in the world. That this should be so occasions no surprise to those who remember that the State has been since long before the coming of the Americans the habitat of the fine horse, and that something of the freeness of its atmosphere tends to give its people an especial love for the best four-legged friend mankind has. Once it was the home of the swiftest racehorses, and the site of the biggest stock-farms in this country. Even those of its inhabitants who could not afford to own them came to love the sight of a fast horse in action with a love which is only equaled in intensity by those who call the Blue Grass their native land. But an era of reform swept over the land and the race-courses of California were cut up into town lots. For a while the people disconsolately tried to find sport in the automobile, then they discovered that polo is not entirely a rich man's game, that it is as enjoyable to the spectator who loves horses as is racing, and instantly polo became one of the most popular diversions of the State.

This acknowledgment of merit in their sport by the multitude could not but have an effect upon the players of the game themselves. Although the polo player is supposed to be the most aristocratic of sportsmen, he is not immune to the applause of an enthusiastic crowd. Seldom is a polo game played in California now without a large gallery, only a small proportion of which comes to the games in its own machines and applauds with its automobile horns. As a result of this encouragement never has as fine polo been played in California. The dream of a few of the leaders in the sport is being realized.

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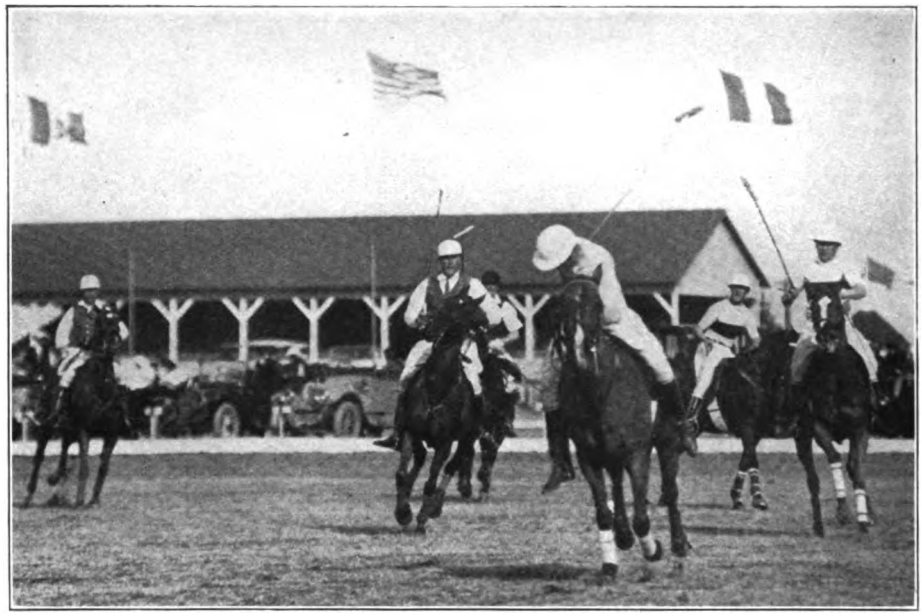

PASADENA VS. CORONADO

Beadleston Stevenson Burke Hobbs

Frank G. Hogan, former president of the Pasadena Polo Club and a native Kentuckian, well expresses the view of these men who have worked for long to make polo a popular sport.

"To men who love horses the thought of the abolition of racing was an unwelcome one, in spite of its abuses, for they believed it meant that the breeding of fine horses would stop," says Mr. Hogan. "Then a few of us who played polo began to wonder if the game could not be popularized and what effect such a move would have on the players. We enjoyed our fine animals for polo and it seemed selfish that others could not enjoy them. We decided to make our games free to the public for a few years, and persuaded the newspapers to devote considerable space to them.

"To-day we have at Pasadena, twelve miles from a large city, crowds of from five to ten thousand people for our tournaments. More men are becoming interested in the game as spectators and more, also, as players. They come at first to scoff, then to admire, and finally to embrace. California polo has become a feature in the polo life of the nation, and more polo ponies are being bred in the West than anywhere else in America.

"Instead of the abolition of racing depriving the public of the opportunity to see fine horses in action, the change has given them an opportunity to see a more sensible, bigger-brained, and altogether superior animal at his best. The gate charges are made just high enough to cover the expenses of the tournaments and incidentals. There is no thought of commercial profit and no thought of relieving each polo player of the expense of keeping up his own string."

In great measure the marvelous growth of polo in California has been due to the class of wealthy families which the balmy climate attracts. The younger men of these families have in many cases been polo players in the section from which they come, and a determining factor with them in choosing California for their home is the opportunities for play there. In other cases they take up the game on the coast for the first time, but with the advantage of playing twelve months in the year if they desire they make rapid progress and quickly become expert.

Four active polo clubs, each of them having two teams and each of them holding at least one and sometimes two tour-

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naments every winter, have made California the Mecca for the polo enthusiast who would keep in the height of condition throughout the year.

Under the activities of these four clubs and the stimulus which an agreeable winter climate has given the game, California has supplanted the South as the cold weather polo center of America. These clubs are the Coronado Country Club, the San Mateo Polo Club, the Pasadena Polo Club, and the Santa Barbara County Polo Club. To them has this year been added the Midwick Country Club, near Los Angeles. The clubs are under the jurisdiction of the Pacific Coast Circuit, the other members of which are the Waverly Country Club of Portland, Oregon, and the Boise Polo Club of Boise, Idaho.

Every winter these clubs have as their guests from four to eight outside teams which pass the winter in the State, going from tournament to tournament. This winter there are participating in the California games teams from Onwentsia Club, captained by Frederick McLaughlin; from the Meadowbrook Club, captained by Thomas LeBoutillier, 2nd; Lord Tweedmouth's English team, made up largely of officers of the Royal Horse Guards; the Cooperstown, New York, team; a Canadian team from Calgary, and a team from Boise, Idaho.

With the exception of a month or two in summer polo is played throughout the year in California, but it is from New Year's until the latter part of April that there are held the big tournaments for which men and ponies cross continents and even oceans. Four months of dates are allotted to the State by the American Polo Association every year, beginning January 1. Generally, however, the tournaments do not commence until early in February when the Pasadena Club entertains. The Coronado tournament is held early in March and the San Ma-

MAJOR ROSS, CAPTAIN OF THE CORONADO POLO TEAM AND ONE OF THE PIONEERS OF THE SPORT ON THE PACIFIC COAST

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teo meet in April. Santa Barbara holds its tournament between the Coronado and San Mateo dates. A summer meet is also held at Santa Barbara and is largely attended by coast players.

Polo was introduced into California about twenty-five years ago, first in the vicinity of San Francisco and later in the South, near Los Angeles. The clubs which first played in the State, the Burlingame, the Santa Monica, and the Riverside, have disappeared in the steady shift of the years and their members have scattered to newer and more vigorous organizations.

The Center of the Game

Coronado Beach, across the bay from San Diego, is now the center of Western polo, and it is there, playing within sound of the crash of the Pacific's breakers, that most of the visiting teams make their headquarters when not attending the tournaments farther north. At Coronado three handsome tropies are hung up every year. The principal one is the Pacific Coast All-American Trophy, play for which is open only provided there are entries from two recognized polo clubs foreign to the State of California. This trophy was won in 1909 by the Burlingame team, in 1910 by the English team, in 1912 by the Pasadena team, and in 1913 by the Coronado team.

Another Coronado cup, the California Challenge trophy, is to become the property of the team winning it three times, but although it has been played for five years no team has more than one leg on it. Burlingame, English, Pasadena, San Mateo, and Coronado teams have each won it once. The third Coronado trophy is the Pacific coast junior championship cup, which has only been played for twice, being won in 1912 by the Coronado team and in 1913 by the All-Hawaiian team.

Major Colin G. Ross, number four of the Coronado team, is the father of modern polo at Coronado, where the game was revived in 1905 and where it has been played continuously since. Major Ross is a five-goal man and one of the most consistent players in the West. It was his enthusiasm which kept polo going before it was established on a firm basis in California. Malcolm Stevenson, substitute of the American team in the international matches, was a member of the Coronado team last winter.

At San Mateo are to be found the largest number of playing members of any of the Western clubs, the fact that this is the only one near San Francisco working to its advantage, The two principal cups of northern California polo are the Crocker and De Salba cups, each of which have been played for many years.

Three family names are particularly famous in the annals of California polo. They are the Tobins, the Weisses, and the Boesekes. Richard M. and Cyril Tobin, of the San Mateo, have been strong supporters of the game in the section where it was first played in the State, at San Mateo. The Weisses were the first players in the vicinity of Los Angeles and three members of the family, Harry, Thomas, Jr., and Reginald Weiss, are still playing with the Pasadena regular teams.

From Santa Barbara comes the most picturesque figure in California polo, Dr. E. J. Boeseke, chiefly known to fame as the only man who plays polo with a stock saddle. This is made necessary by a weak leg, the doctor having broken his thigh-bone once in a game. Dr. Boeseke's team mates usually are his brothers, E. A. and Dr. B. C. Boeseke, and his son, E. J. Boeseke, Jr. These men play a dashing style of polo which finds little acceptance with the expert judges, who say their success is chiefly due to the speed of one pony, the wonderful "Blue Knot," believed to be the fastest animal in the game. This pony is the property of Dr. E. J. Boeseke and it is no uncommon thing for him to play it in five of the eight periods of a hard game. In addition to having speed, the pony is apparently incapable of feeling weariness. Dr. Boeseke has refused fabulous sums for "Blue Knot."

One of the most notable events of California polo was when, in 1912, at Pasadena the Santa Barbara team, playing what was contemptuously spoken of as "cow-puncher" polo, ran off their feet the scientific English team composed of Lord Tweedmouth, Lord Herbert, Vis-

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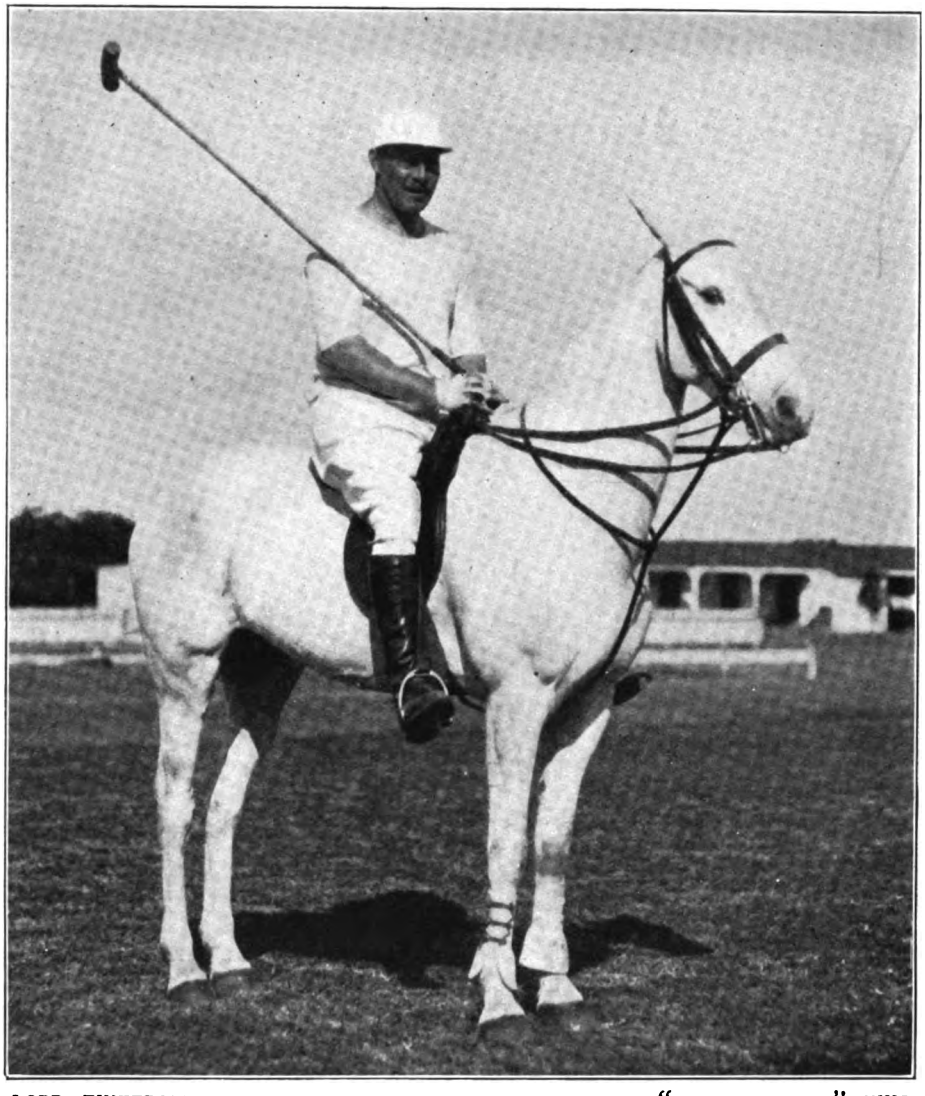

LORD TWEEDMOUTH, WHOSE TEAM WAS BEATEN BY "COWBOY POLO" TWO YEARS AGO

count Gower, and Walter Dupee, defeating the foreigners by a big score. The game was played before a gallery of ten thousand people who were "ag'in the English" from the time the ball was thrown in. To this day the Boesekes are remembered by men in Pasadena who cannot recall the names of the players on the local teams.

It is largely because of the wonderful string of ponies which participated in the California games in the season of 1912-1913 and last summer were sent East to help the Meadowbrook team keep the international cup in America, that the eyes of the polo world are turned to the West. Two Hawaiian ponies were among those from the West which created a stir at Meadowbrook. They were Dr. Will P. Baldwin's "Carry-the-News" and Walter F. Dillingham's "Helen C." The latter was used by Larry Waterbury, while "Carry-the-News" was mounted by Captain Whitney. This chestnut horse, one of the most valuable polo animals in the world,

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MALCOLM STEVENSON ON "GOLDEN GIRL"
An Eastern player who is usually found in some of the big Coast tournaments

was bred in the Hawaiian Islands. His sire was a famous pony, "Eastertide," but his dam is unknown. The pony was originally the property of either Frank or Harry Baldwin. Being unable to settle between themselves which was entitled to him, they compromised by giving "Carry-the-News" to their brother, Dr. Will P. Baldwin.

Polo was introduced into the Hawaiian Islands about the same time it was first played in California, twenty-five years ago. Inter-island tournaments are held every year in August or September, with the islands of Mani, Oahu, and Kanai represented. It was never until last winter that the islanders attempted to compete outside their own bailiwick. They then sent to California a team composed of Walter F. Dillingham, Dr. Frank Baldwin, A. Rice, and H. K. Castle, with Harry Baldwin as substitute. The visit was a very successful one, and while Hawaii is not represented in California by a team this winter, a team will be sent there in 1915.

Fine fields and ample stable accommodations make the California clubs particularly popular with visitors. Coronado and San Mateo each have a turf field and two fine turf fields at the new Midwick Club have just been opened for use. At Santa Barbara also a turf field is about ready for play. Two dirt fields

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are already in use there. Pasadena has what is probably the only oiled polo field in the world. A small quantity of crude oil has been worked in with the dirt in a manner to make what is pronounced the fastest playing surface known.

Although California boasts of no eight or nine goal players, it has the highest ranked polo men in the country outside of a few clubs in the vicinity of New York and Boston. San Mateo has the highest average rank on the coast and the two highest men, Walter S. Hobart and Thomas J. Driscoll, are both six-goal men. Of this club Richard M. Tobin is rated at five goals and Cyril Tobin at four.

In the South Major Colin G. Ross, of Coronado, and Reginald Weiss, of Pasadena, are the highest men, each being ranked at five goals. Thomas Weiss, Jr., of Pasadena, and H. F. Robertson, A. Hone, and G. Noton, of Coronado, are rated at four goals. The latter two usually play with the Calgary team, during the winter season, that place being their home. Lord Tweedmouth, who is this winter making his second visit to California at the head of an English team, is ranked as a five-goal man.

In the West, and indeed throughout America, a popular superstition exists that the polo pony is but a converted stock-ranch horse. While all American polo animals owe much of their stamina to the cow-pony, they must have a large percentage of thoroughbred blood if they are to have the requisite speed and gameness. The thoroughbred strain which runs through the California ponies is not a whit lower in pedigree than that in Eastern animals, in fact, most of the latter are from the West.

Nowhere may finer strings of animals be found. The Weisses and a few others every year part with a number of horses and still maintain their places high up in the winning columns. One of the finest strings in America is that belonging to Walter H. Dupee, of the Coronado Club. Upon one visit of four Englishmen to California for winter polo their entire team was mounted from the stable of Mr. Dupee throughout the season without depriving the owner of the animals he wished to use himself.

Many of the best animals played at the Meadowbrook, the Piping Rock and other Eastern clubs have come from the West, and every winter half a dozen unattached polo players from the East visit California in search of new ponies. Seldom, however, are they able to persuade the Westerner to part with the pride of his heart, although a few of the Californians derive great pleasure from breaking in half a dozen new horses every season. But the really fine ponies, the ones the Easterners come to admire, are never sold.

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THE WOMAN'S WEAPON

By WILMA ANDERSON-GILMAN

ILLUSTRATED WITH PHOTOGRAPHS

Not an Essay on the Hat-Pin, but a Little Talk on What the Pistol Offers to the Outdoor Woman in Pleasure and Protection

"GOD," says an old toast, "made big men, and God made little men; but God bless Col. Colt, who made all men equal." A pistol will shoot just as straight and hit just as hard in the hands of a woman as it will for the most brawny and brutal of men. As between these two, it gives each an equal power to inflict injury upon the other and leaves the victory to the one having the more coolness, courage, and skill. And the day when woman was willing to admit that she was inferior to man in these qualities is long past.

I do not like to dwell upon this phase of the pistol question. But, to the average person, man or woman, the pistol undoubtedly appears first and most a weapon of combat. The subject is one which will not down and might as well be touched and disposed of at once, thus clearing the air for a consideration of the wider and more pleasant field of the pistol's usefulness.

The knowledge that she has a pistol and knows how to use it certainly does tend to reassure the woman alone in camp or cabin and enable her to face things very confidently. It is true that the rifle or shotgun are even better weapons of defense, but the pistol is so much more portable that it is the arm she can most easily keep where it will be in her hand at the first instant she needs it.

I can imagine no more morbid, fear-fraught situation than that of a woman alone save for a pistol she is afraid of, which simply serves to remind her that, in some remote, improbable contingency, she might have to rely on it for protection.

To be a real safeguard the pistol to her should be an article of familiar, everyday use; something which she can utterly forget until the time she wants to use it—and then pick up and use as naturally as a saucepan or a curling-iron.

It was my entire innocence of the romantic, dime-novel idea of firearms which led to the practical, commonplace use of this arm by my husband as well as myself. A thievish red squirrel had earned the death sentence and I, in my very ignorance, turned to a little .22-caliber revolver as the instrument of execution. Here was a squirrel to be shot and here was a pistol which, as I understood it, was made to shoot things. So I took the pistol and shot him.

That very simple act saved us both from the "gun-toter" state of mind. We kept up target practice and tried to improve our marksmanship, but it was not at all with the idea of preparing for a possible "gun fight." In the woods, whether on canoe trips or around the shack, we both wear the pistol—because it is convenient and always at hand when we want it. The use may be a marauding porcupine inside "the dead-line," a rabbit or a brace of partridges desired for the table, a fish to be quieted before he is taken aboard the canoe, a signal shot to give information of our whereabouts—or a provoking tin can may move the spirit to a little target practice.

The practice is one which has given the "old timers" much gratifying amusement. It is seldom indeed that one en-

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counters a backwoodsman who knows or will even believe that a pistol can be put to any practical use. It is less hard to understand this state of mind when one has seen the pitiful, pot-metal revolvers these people sometimes buy and the entire lack of understanding with which they use them.

Yet pistol shooting is just like any other shooting with a rifled barrel, only more so. You align the sights on the object which you wish to hit and strive to pull the trigger while they are in line. It is this firm, steady increase of pressure upon the trigger which is hard to master; which makes the expenditure of many hundred cartridges in constant practice the price of pistol efficiency.

It is also the thing which makes the pistol most peculiarly a woman's weapon. Strength has nothing to do with it, muscular steadiness and nervous control have everything to do with it. And in these the average woman is superior to the average man. She has never jaded her nerves with stimulants nor dulled them with narcotics; her muscles are light, loose, and trained to delicate work, while a man's are frequently over hard and trained to put forth strength in violent, abrupt jerks.

CAN VIEW ALL COMERS WITH CONFIDENCE

THE CONVENTIONAL TARGET SHOOTER'S ATTITUDE

Personally, for all deliberate shots, and shots at wilderness small game are very deliberate indeed, I find best the conventional target shooter's attitude: feet firmly placed, body erect and pistol arm fully extended. If the arm is thrust straight out in front, it is lax and uncertain; if straight to the side it is over tensed. About midway between these extremes will be found a very steady and comfortable position.

In such shooting a painstaking alignment of the sights and a gradual, steady, increasing pressure on the trigger are necessary. A sudden jerk will point the pistol high at the moment of discharge. The resulting miss is very generally ex-

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A BRACE OF PARTRIDGES FOR THE TABLE

cused on the ground that "the pistol kicked" by many persons, persons who usually denounce the pistol as unreliable for a fault which is their own.

As one's practice progresses, one will find that the pistol is leveled more and more nearly upon the mark when the arm is extended, that the eye and the sights are called upon to make less and less correction of the aim.

Thus, when the mark is large and near at hand, it is possible to hit it without "aiming" the pistol in the conventional eye-and-sights way at all. At this stage, by a very little practice, one can learn to shoot approximately true without raising the pistol hand from the hip.

This so called "snap shooting" has one value other than the far-fetched one of "getting off the first shot in a gunfight." That is for shots at twilight, or even at night, when the mark is visible and the sights are not. Since the arm alone will point the pistol approximately true, all the bullets are bound to be grouped in the vicinity of the mark, and, if enough are fired, there is a strong probability that one will hit. Once in a while, as on a partridge "budding" high against the sunset glow or a black porcupine eating a whitewashed board by moonlight, this sort of volley firing is productive of desirable results.

It is because of such chances as this and because I frequently miss and want to shoot again quickly rather than on the mere advantage of a many-shot weapon as a means of defense, that I care little for any of the many excellent and accurate .22-caliber pistols as a woods gun. Just because one is a woman is no reason why one should run to the "dinkey" in guns. Pocket revolvers with small handles, sights close together, and toilsome trigger pulls won't give any very dependable shooting to a man —no more will they shoot well for a woman.

The Guns She Used

For several seasons I used very comfortably a revolver of the late army pattern, one with a six-inch barrel weighing a shade over two pounds and shooting the .32-20 rifle cartridge. It was very easy to shoot accurately as both its weight and length were an aid to steady holding. The cartridge was an admirable one for woods work for it threw a bullet small enough not to mutilate small game—and threw it with force enough to make the arm one to be relied upon even against more dangerous creatures.

It was an arm typical of the class of revolvers well suited to woods service and had a grace of line and smoothness of operation particularly attractive to a woman. Against it were only two things, its length and its weight. It was something of a burden to carry and rather in the way when one sat down, particularly in the canoe. Of course I carried it on a belt, in a scabbard, as all such guns should be carried.

During the past summer, and at the present time, the automatic pistol is giving me a lot of satisfaction. First of all it is "more gun" for its bulk and weight than the revolver. Though the

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total length of my present pistol is but seven inches, hardly more than the length of the barrel of my revolver, I lose only one-fourth of the distance between the sights on the longer arm. And though it weighs but 21 ounces, it gives me ten shots, four more than any revolver offers.

The load, the .380 automatic pistol cartridge, shows a slight concession to the "defense idea," but it is very accurate and, thanks to a bullet fully jacketed, really doesn't muss things up any more than the .32-20. It is true that "the other end of the canoe" insists that he is on the right trail with a .32 auto and that my "coast defense gun" is built for robbers, not rabbits.

Which only goes to show that the selection of a pistol is merely a matter of taste after all. Whether single-shot, revolver, or automatic suits one best is something to be decided by trying.

For the woman who wants to carry a pistol in the woods any one of the types described will render good service. She may select most wisely if, after mastering the rudiments of shooting with most any old pistol belonging to her menfolks, she will go to a well-stocked gunstore and look over a number of examples of each type.

There remains only the matter of carrying. Of course your woods clothes will have pockets, even unto the hip "pistol-pocket" of fiction and the melodrama. But they are inconvenient and insecure receptacles for a pistol. Both for your greatest convenience and for the safe-keeping of the arm, carry it in a substantial leather scabbard on your belt. Let the scabbard be plenty long enough to protect the muzzle of the pistol and, by all means, let it have a flap or safety strap to keep it from falling out and getting hurt or lost.

Finally, shoot it often and clean it as often as you shoot.

Just remember that you can become an efficient shot and resolve that you will.

The mastery of this, the woman's weapon, will do much to increase the confidence with which you may go adventuring into the woods, add to your entertainment while you are there, and, last but not least, to the amount of meat in the camp kettle.

Herbert K. Job writes in the March OUTING of life and conditions in CANADA'S GREATEST GAME COUNTRY

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THE NEW YEAR IN MOTOR-CYCLES

By GEORGE M. JOHNSON

Changes That Prominent Manufacturers Are Introducing to Make the Machines Better, Safer and More Comfortable

TWELVE years ago a motorcycle consisted of a springless bicycle frame in which was strapped a very inefficient specimen of gasoline engine. In those happy days, if a rider could cover twenty-five or thirty miles in an afternoon without encountering trouble of one kind or another, it was an achievement to be proud of. But the men behind those embryonic motorcycles had faith and foresight enough to look far ahead into the future; they refused to be discouraged at their numberless tribulations—at the difficulties of designing engines which would stand up and not burn up under the strain of motorcycle use, at the problems of properly cooling and lubricating those engines, etc., etc., not to mention the scant encouragement given by a highly sceptical public. To-day the men who staid in the game are reaping their rewards, and the motorcycle business is no longer a lottery.

It might be worth while in this connection to mention a few of the biggest improvements made during these years of gradual development. One of the most important is the clutch. Four seasons ago a clutch ranked as a luxury, an accessory, and riders who insisted on having their machines clutch-equipped had to pay extra to gratify that desire. In 1910 the Indian set the pace by putting clutches on all models at no advance in price, and to-day there is not a machine which does not offer some type of clutch. The most popular type is the multiple disk, where the drive is transmitted by metal to metal friction, or metal to a fabric like raybestos. It should be added that the cone clutch has also proved its worth, the Reading Standard, for example, employing this type. The Excelsior uses the multiple disk clutch on single speed models and the cone on two-speed models.

The clutch has done more than any other one thing to popularize the sport of motorcycling. Its introduction marked the end of pedaling or pushing the machine along until the engine began to bark; it made possible the riding of the machine at a veritable snail's pace, as is often desirable in negotiating slippery roads or traffic, and it gave increased hill-climbing power through the low gear effect caused by slipping the clutch when the engine was turning over at a good speed. It is not advisable thus to make the clutch fill the place of a two-speed gear, for a tremendous amount of power is absorbed by the slipping disks, until the clutch may become almost red hot. Such treatment fattens the repair bills, though no harm will result from a moderate degree of slipping, especially if the engine is running at a moderate speed.

Great advances have been made in the springing equipment—frames, forks, and saddle, all tending to make motorcycles comfortable. Spring forks are about equally divided between the leaf plate (or cradle) and coiled spring. The same might be said of the spring frames though these last are not common as yet, the majority of makers preferring to stick to the rigid frame with the addition of a spring seat-post. There can be no doubt that a spring frame gives very comfortable riding, and it seems

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as if the decreased vibration ought to give greater life to the machine as a whole. Practically all the vibration that a motorcyclist gets when riding comes from rough spots in the road, not from the engine, as is commonly supposed. There is little or no jolting on a good road, while the spring frame or spring seat post—and all machines have one or the other—does much to remove it from a poor road.

Of course motorcycle engines are now highly efficient. Mechanical inlet valves are universal, and mechanical oiling systems are replacing the old style hand-pump. With this it was the rule to "give her a pumpful about once in so often," according to the rider's judgment, and as a natural result the engine was either flooded with oil or on the point of running dry two-thirds of the time. The mechanical pump is designed to maintain a constant level of oil in the crankcase, so that all the rider need do is keep the oil tank full, though the hand-pump is usually retained for use in an emergency, or for filling the crankcase after the old oil has been drained off.

As an illustration of motor efficiency it might be said that the writer's last season mount, a 1913 twin, covered close to six thousand miles during the year, and in that period gave absolutely nothing that could be called "engine trouble." The valves were ground twice in the forward cylinder, and but once in the rear.

Now let us turn to a more detailed survey of the models offered the public for 1914. There is such a bewildering array to choose from that the problem of selecting a mount is by no means an easy one.

1914 is going to be a "two-speed" year. Last season only a few machines were thus equipped—the Indian, Thor, Pierce, and Flying Merkle offered the two-speed on certain models—but for the coming season, with a few exceptions, the manufacturers who do not market two-speed models are newcomers in the field or those whose output is limited. The statement that within a very few years the single speed motorcycle will be a thing of the past looks like a safe prediction, for the Yale has already made the big step. All Yale models for 1914 are two-speed, of the planetary principle. Both the Yale and Excelsior two-speed is of this type, the most noticeable difference between the two being in the clutch—cone for the "Ex," disk for the Yale.

The Indian two-speed has the honor of being longest on the market, for 1914 marks the fifth consecutive year in which the Hendee Company has put out two-speed models. Their clutch is located on the countershaft, and seems like a remarkably compact and simple device. Four gears are employed, with a sliding dog, which by engaging one or the other of two gears gives high or low speed.

The Harley-Davidson two-speed is unique in being located in the rear hub, where their clutch is also placed. The change speed control for both Indian and Harley is by a small lever on the top bar of the frame, just in front of the saddle. Among other makes offering two-speed might be mentioned the Henderson four, the De Luxe, the R. S., the Minneapolis, the Michaelson, and Feilbach. Further description of the various two-speed designs on the market is hardly necessary, but the preceding will show how the two-speed idea has gained in this country.

Giving "Full Equipment"

Another big gain is to be seen in the "fully equipped" machines which have made their appearance. This much-to-be-desired development has come far more slowly in the motorcycle industry than with the automobile. One make only, the A. M. C., made a point of full equipment last year, but for 1914 two of the big manufacturers have joined the ranks. The rest are bound to follow. The equipment provided includes head and tail light—either gas lamps and Presto tank, or electric lamps and storage batteries—speedometer, horn, and luggage carrier. The big advantage of buying a motorcycle already equipped is that the cost of the various articles is materially reduced, and furthermore that the whole outfit is selected to fit and match that particular make or type of machine.

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Another fitment which was quite rare last season, and which will be well-nigh universal for 1914, is the footboards, built so that they fold up instead of breaking if the machine goes over. These footboards are more important than it might appear at first sight to the average observer, for they add fully twenty-five per cent. to the comfort of a motorcycle. The writer's mount is supplied with footboards, and the pedals are never used save to crank the motor.

Pedals have entirely disappeared on some models—self-starters or kick-starters taking their place; of this more later on—and it is merely a question of time till they vanish utterly. Pedals are troublesome things at best; they are likely to be bent and broken if the motorcycle topples over; they have a nasty little habit of digging into the pavement when the machine tilts sharply in taking a curve, and at the best they are more or less of a failure as footrests, compelling the rider's legs to assume a cramped and uncomfortable position.

Engines show little change. Perhaps one should not say that they are perfect, but there is not much left to hope for in the way of additional improvement. Small refinements may be noted. For example, many engines now come supplied with dust-proof priming cocks, for easy starting in cold weather, when the pistons are "frozen" to the cylinders by stiff lubricating oil. A small "gun," which provides a ready way of taking gasoline from the tank for priming the engine, cleaning tires when repairing a puncture, etc., often takes the place of the regular filler cap.

There is a growing tendency—very laudable, by the way—to enclose entirely the valve mechanism, both inlet and exhaust. This prevents dust from getting at the moving parts and so reduces wear to a minimum. It also makes for cleaner motors, as it is less easy for surplus oil to work out from the crankcase. The Iver-Johnson is an example of this development.

Other motor refinements aim at quieter running, at greater power through improved valve design, balance of moving parts, etc. Valves themselves are of course vitally important. One maker advertises that the valves in his machines for 1914 are of special steel, tested to withstand a temperature of 1,800 degrees without pitting or burning. Mufflers have received some attention, though now they are so efficient that there is little excuse for applying the term noisy to motorcycles. Whenever you hear a noisy machine, the rider has his muffler cut-out open and is thereby a law-breaker.

The season of 1913 was conspicuous for big size engines; it marked the vanishing of more than one 4-h.p. single, a five taking its place, while some twin engines of 9-10 h.p. appeared. Fewer changes of this sort are to be noted for 1914, though at least one old make has brought out a new "big twin." With an efficient two-speed gear there is less excuse for increased horsepower through larger engines, and the machine of the future will undoubtedly be the ever popular "seven" with two-speed.

Twins Have the Call

The present tendency is altogether away from the single cylinder toward the twin. More than one manufacturer is offering twin models only, and nobody, with the possible exception of a concern which markets a two-stroke machine, is centering much attention on the sale of singles.

One company, advertising an output of 60,000 for 1914, states that but two per cent. of these will be singles. Little can be said for the one-lunger anyway. The added complications (such as they are) of the extra cylinder count for nothing; the twin is not harder to take care of or handle than the single; it gives smoother running, greater flexibility, more power for steep hills, and more speed on the level for those who wish it.

There is not very much new in the transmission question. A year ago, in an article which appeared in OUTING, the writer mentioned a combination drive of V-belt and chain. This type of transmission is exceedingly popular in England to-day, and a number of experimental machines so equipped have given excellent accounts of themselves on American roads during the past summer,

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but as yet no maker is offering it as standard drive. However, the R. S. has a new undergeared V-belt drive which possesses some features in common with the chain-cum-belt type. This permits the use of a large front pulley, and so avoids the troubles which have always resulted from crowding a stiff V-belt around a small pulley. The chain really has the best of the argument, all things considered, and continues to gain steadily.

At present no maker turns out belt machines exclusively, as many did a few years ago, while the majority refuse utterly to dally with belt transmission. This is due partly to improvement in clutch design (the clutch being a vital part of chain transmission) and to some extent to the great increase in popularity of twin-cylinder machines, which require a more positive drive than the belt. There is one decidedly new form of transmission, new to motorcycles, that is, The Feilbach two-speed model employs shaft drive, the power being finally delivered to the rear wheel by worm gear.

One important feature which has received considerable thought on the part of designers is the brake. With high-power engines, capable of driving motorcycles at terrific speeds, the matter of stopping quickly is naturally of some interest to the rider. Hitherto many machines have carried overgrown bicycle coaster brakes, but now band brakes are coming into general favor, usually controlled by a lever on the footboard. Where pedals are retained, back pedaling also operates the band brake, as in the old-style coaster type.

The band brakes are very reliable and strong; they require little attention, save a very slight adjustment once or twice a season to take up the wear. Some machines, especially two-speed models, have two separate brakes, one controlled by foot-lever and one by hand-lever on the handle-bar. This is following English practice, for over there the motor vehicle laws require every motorcycle to have two brakes.

Very decided improvements are also to be noted in the guards that cover the driving chains. The short chain from engine pulley to countershaft has long been protected, but the long chain has been pretty generally neglected. For the coming season, however, a number of makes fit long guards over the rear chains. With one make, the H-D, the guards are padded with felt, which is in turn protected by thin plates of steel, to deaden the noise caused by a loose chain striking the metal.

These chain guards perform a double duty. In the first place, chains should be well lubricated, for that lengthens the period of service and cuts down transmission troubles; the guards prevent any grease from reaching the rider. Furthermore, they do much to protect the chains from dust and road dirt sucked up by the rapidly moving tires. The dust, which is nothing but powdered rock, will work its way under the steel rollers, and there act as a grinding mixture, shortening the life of the chain.

Enclosing the Drive

Over in England they have been experimenting with enclosed chain drive, the chain running in an oil bath. This surely will prevent undue wear, but the chain-case is always unsightly and is likely to ooze forth considerable oil. It also makes the removal of the rear wheel and the adjustment of the driving-chain a matter of some difficulty, so that there is little chance that the enclosed drive will ever find favor on this side.

Last season the Flying Merkle sprang a mild sensation in a self-starter, worked by a coil spring which was rewound when the motor started. It is capable of turning the engine over eight times. 1914 brings out one other starter—on the Indian model known as the Hendee Special. It is of electric type, worked by juice from storage batteries kept charged by a generator run by the engine. The electric motor, rated at 1½ h.p., is capable of turning the engine over at 500 r.p.m., which, according to the makers, is faster than any automobile starter. This same model has a twelve-candle-power electric headlight, tail-light, electric horn and speedometer. It has no magneto, the ignition being from the storage batteries through a coil.

Aside from these bona-fide self-start-

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ers, there is a tendency toward what are called "kick" or "step" starters. In these a sharp thrust downward of the foot on the starting lever will revolve the motor several times. At the conclusion of the "kick" the compression release is dropped and the motor fires. In one model, at least, a spring returns the lever to its original position should the first attempt fail. All these starters are provided with safety catches which disconnect the attachment should the engine backfire. The starters work independently of the rear wheel, so that it is not necessary to put the machine up on its stand when starting.

Nineteen-fourteen will mark a big development of the side-car. Several independent companies are marketing more or less luxurious attachments for converting a motorcycle into a three-wheeled vehicle, and not a few motorcycle manufacturers are producing side-cars to fit their own two-wheelers, while the frames of the latter are sometimes particularly designed to receive the car.

Really the side-car is surprisingly comfortable, and opens up a new field to the motorcycle. It enables a sportsman to carry his dog on a hunting trip, so that out-of-the-way regions can easily be reached, and there is room enough in the side-car for a fellow-hunter in addition to the pup. A string of decoy ducks can easily be transported, together with plenty of extra clothing to keep the hunter warm while he is waiting for the birds to come in. It is hardly needful to call attention to what the side-car can accomplish in the way of making a fishing excursion doubly enjoyable. In short, it does all the duty of a runabout at far less expense.

Two years ago there was a very notable drop in the price of motorcycles. At the time it was predicted that there would be no further tendency downward, but the prediction comes to nought with another decided drop for 1914. The price for single-cylinder machines is now in the neighborhood of $200, with one model, which has made a very enviable reputation for itself in the past, priced as low as $150. Several of the leading twins have dropped to $225, a falling of from $25 to $35. Other twins have dropped from $285 to $250. In some cases where the price has not been lowered increased value is offered for the same money.

Take the Hendee Special as a typical illustration. This two-speed model lists at $325, which was the former price of the regular two-speed, with none of the features that go with the Special. The regular two-speed model of that make now sells at $275, or $300 fully equipped. The Yale models (both two-speed) are $235 for the single and $285 for the twin. The H-D prices run from $200 to $285, according to model, the two-speed being $35 more than the clutch machines, and the Iver-Johnson's from $200 for their single to $275 for the double. These few prices are cited as typical of the whole range of motorcycle possibilities, and will give a good idea of the average initial expense of a machine.

In the foregoing article the writer has attempted to present a fairly complete summary of the situation. He has sought to avoid too many technical details and explanations, probably not of interest to the average reader, seeking rather to give a prospective motorcyclist information which might be of some value.

There is not space here to boost the sport of motorcycling,—the constantly increasing numbers of machines speak for themselves—but in conclusion let me say this: the man who has never ridden a motorcycle has missed a mighty good thing.

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MAN AND HIS PLOW

By EDWARD T. MARTIN

How the Natural Cover of Game Birds Has Vanished at the Coming of the Farmer

WHICH has contributed most to the decimation of American game birds, man with his gun, or man with his plow? Powder and shot, or an advancing civilization? It is an open question. Civilization has cut the prairies of the great Northwest into little farms. It has even denied the birds a nesting place in the long, coarse grass of the sloughs and forced them to build in wheat or hay fields where, about hatching time, a reaper or mower drawn by heavy-stepping horses, or worse yet moved by power generated within itself, would come and frequently crush both nest and eggs.

Fire and ax, helping the plow, have reduced the habitat of quail and pheasant, and the dredge has reclaimed millions of acres once the abiding place of ducks and geese. Then with home and shelter destroyed by civilization, man and his gun have done the rest.

The first reclamation work I can remember was done in the Pineries near the present city of Gary, Indiana, and not half a dozen miles beyond the limits of Chicago. In the early sixties this was a desolate, unsettled country—a home of the wild. It was full of little lakes and slough holes, bogs and quagmires, places with no bottom, tracts that one, in walking across, would shake for yards and few hunters cared to penetrate its recesses.

There was but one man, a middle-aged German, who shot in the Pineries regularly and he was the only market shooter ever known by me who acquired riches through his gun. His method was this: He would make one or two pot shots daily, then peddle his kill in Chicago—two bits each for large ducks, two bits a pair for small; then instead of trusting his money to the good frau's stocking, he bought land, and in those times a few dollars would pay for an acre of these sand-covered barrens.

The small number of persons he knew laughed and called him crazy. But he bought, and as fast as he sold his game kept buying. He waited patiently for years. Prices advanced. He smiled and shook his head at offers made for his holdings. Then one day came word that the steel company intended building their city right around his property. Values went sky high and finally he sold, receiving more money than he knew there was in the whole wide world.

About the year 1868 a deep ditch was dug which to a considerable extent drained the Pineries, leaving only scattered ponds with water sufficient for the needs of a few teal. This was the beginning of trouble for Western water fowl and here was the first of Indiana marsh lands to be reclaimed; but the ducks driven away were by no means homeless. Besides the vast Kankakee swamps close at hand—including English and Beaver Lakes and the smaller Calumet country to the north—there were from far up in Wisconsin way down to southern Illinois, thence on to Reelfoot Lake and the New Madrid bottom, thousands of square miles of sheltering swamps and hundreds of lakes overgrown with wild rice and celery. No, the ducks didn't miss the Pineries. They had yet to learn that the long ditch dug there was but the beginning.

Then the dredge attacked the Kankakee and cut miles of wide ditches, almost

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canals. English Lake became a little dab of a pond, Beaver Lake a rabbit warren, or as a local shooter said, "All the ducks you git thar, 'cept when water's high in the spring, is four-footed ones with long ears an' short tails."

All through Indiana, all through Illinois, all over the West reclamation became general. Every swamp, every bit of bottom land where drainage was possible went the same way. The feathered inhabitants of Kankakee, of American Bottoms, of countless little ponds, lakes, and marshes were deprived of shelter except when the spring freshets came. A few lakes along the Illinois River, the Calumet country, nearly all now a part of the city of Chicago, and now and then a marsh, the preserve of some gun club, escaped. These were all; and every spot of them swarmed with shooters, whose continued fusillade lasted from before light until after dark and sometimes all night.

Safe Over the Lake

No, it was not all either. Lake Michigan remained. That could not be drained and it was a haven of refuge for the homeless water fowl. The birds soon learned; they gained wisdom by experience; they changed their ways. Puddle ducks quit their puddles and, with their deep-water relations, spent daytime sleeping on the big water and after dark flew fifty, maybe a hundred, miles to some favored cornfield, stubble, or by-day-hunter-infested marsh where they fed in peace and quiet until an hour before dawn, when it was up and away again.

The writer, before Indiana law prohibited early shooting, got many ducks by setting his decoys half an hour before the first pencils of light showed between him and the east; then, sitting in his blind, he would talk on his caller. He would receive answering quacks from all around, front, back, overhead, and then hear little splashes where the birds were plumping down among the decoys. Then as first daylight came, when looking behind it was yet black night and facing the east just little blotches could be seen on the silver water in front, it was worse than a Chinese puzzle to tell live ducks from wooden decoys. A mistake was sometimes made; then an unfortunate decoy would suffer; but very often the real ducks would remain waiting for the inanimate ones to fly and as many as half a dozen shots be fired before all those swimming in front were killed or frightened away.

Any single bird or belated flock within sound of the caller would take direction from its notes when starting for the big lake, swing low over the decoys and some always stayed behind. This little flight was over before sunrise and it was useless to remain out longer; there would be no more ducks until next day. One morning the writer killed forty in this manner and a dozen other gunners, not knowing how, got but six. Included in this forty were ducks of ten different varieties, from mallard to meganser, with a lone canvasback for good measure.

Many years in succession ducks, particularly in the fall, worked the trick, stayed bedded all day in very large flocks, covering miles of Lake Michigan near its head, where, excepting in heavy northeast storms, they were sheltered; then after night came, scattered over three or possibly four states to feed, and worked back to their refuge long before it was again fully light.

Standing on the lake shore, in from where they bedded for an hour or more at night, it was a continuous whistle of wings, mingled with the cackle of conversation as droves of ducks passed overhead. Once, only once, the writer caught them in daylight. This, of course, refers to the later days, after shooting had become almost a thing of the past.

Early one November there came a sudden blizzard. It was a heavy northeaster, bringing with it snow and sleet that stung like fine shot. It reminded one of old times to see so many ducks—birds which had been driven in from the big lake and were seeking shelter. There were great sheets of them flying low and settling in the little lake or its bordering marsh, without even circling, and their talking and quacking made so much noise that a metal tongued caller was almost useless.

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The writer was soon drenched to the skin, having gone out lightly dressed before the storm came, but he shot until prudence said, "Go in. Don't overload the boat," then with seventy-five ducks he started for camp through two miles of a raging white-capped lake. So he made his way in, standing with a ten-foot push paddle and shifting weight from foot to foot, thus tipping the boat to let the rollers go underneath. It was a wild ride. Trees along the bank, close to which the boat kept, bowed as it passed. One old ruin in particular, which stood away from the others a little more than man's height out of water, was almost human in its actions. A rent in its bark near the top resembled a leering mouth. A blast of wind, a rolling wave, then with a limb waving like an outstretched arm, it would bow low, straighten up, and a shriek of wind would seem to make it say, "Welcome, old man. Welcome. See what I am, a wreck, a ruin! Ha! Ha! Ha! So goes the world, young and strong to-day, old and useless to-morrow. My fate, your fate, the fate of all," and it bowed and waved again. It was uncanny, and I can see it as I write, bowing, waving, and grinning.

The storm blew itself out by midnight, but early next morning the brigade was out full strength, every man or boy in the neighborhood who could get a gun or borrow ammunition, the writer among them. There were more gunners than ducks. Almost to the last straggler the birds were back on deep water.

The year after these happenings the writer watched from a long pier jutting into Lake Michigan the early spring migration. There were water fowl whose natural abode was in the Mississippi bottoms, ducks whose habitat was the Kankakee. Birds from many a sunny shore, from many a weedy lake had learned a lesson in self-preservation and were avoiding hunter-haunted marshes and making their way northward over the big lake. These were distinct from the regulars who were sleeping the day away in their usual place.

The travelers rested at night and in the early morning long lines of them were to be seen as far as a pair of strong field glasses could reach. After sunrise, flock after flock would pick themselves up and continue north. A weary bunch of night rovers occasionally rested for a few hours, then passed on. This migration lasted several days—four I think, but even after the main body had passed, for two weeks a few flocks each day followed the army ahead, and this at a time when it was said the ducks had all been killed, that wild fowl shooting was doomed, and when, except as already told, there had been no fall shooting.

Fishermen said this spring flight over Lake Michigan had of late years been of usual occurrence. There is no doubt that part of these were ducks driven from home by the dredge and only saved from destruction by their own sagacity which taught them to abandon old paths and seek safety in new. The more I shoot, the longer I study game, the greater respect I feel for the intelligence of the wild and for the quickness with which all wild things learn. How they change to meet new conditions and how they reason almost like humans!

The Fate of the Chickens

It was different with prairie chickens. They were not able to avoid man by taking to deep water. To be sure, they are half-way migratory birds. That is, some will go a long ways south in winter, some not so far, and many not at all.

Once in Northern Iowa, another time in Minnesota, the writer saw a heavy southward flight of chickens. He followed or traced the Minnesota birds for thirty miles and the last he heard they were still sailing high in the air headed for a warmer clime. About the same time many chickens disappeared from where a few days before they had been very plentiful and later their place was filled by smaller, ill-fed birds, mixed with a lot of sharp-tailed grouse, the difference between the large, fat home birds and the thin newcomers being very marked.

A further proof of migration came when shooting in the White River country, south of Duvall's Bluff, Arkansas.

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The prairie, as far as one could ride, was alive with prairie chickens, more than I ever saw in Minnesota or in any other place where it had been my fortune to shoot. An old market hunter, showing me over the ground, pointed with pride to a cloud of several thousand, rising like grasshoppers, a hundred yards or more ahead. He said, "You see them birds? Well, they all go north in March or April and more come from the South to take their places."

Others there told the same story, which fitted in with my own observation, so whatever they do now, there is no doubt that in the eighties many chickens made a winter pilgrimage each year to Dixie's sunny land, and possibly if there were more of them, the same flight would be noticed at the present time. But go where they would, man and his dog were there looking for them. The farmers and their sons, North and South, said, "These birds live on our land and destroy our crops. Why shouldn't we kill enough to eat?" They did, and when chickens were plenty, their appetites were ravenous.

Is it to be wondered that with no refuge, their nests broken up, their grassy homes plowed under, prairie chickens decreased rapidly? It is really surprising so many were left. Now with strict laws for their protection, give them a spot in which to raise their young, and rapid breeders as they are, it will not be long before the old places know them again.

Any account on paper of the ravages made by a natural advance of civilization in the habitat of pinnated grouse is but mild when compared with the actual seeing. The writer did much shooting in the Northwest during the eighties, making at least one record kill of chickens. He went over some of the same ground again late in the nineties. Everything had changed. Land had become valuable. Corn, once so cheap it was used for fuel, now paid well for the raising. Wheat was booming. Every possible acre was under cultivation. Much of the slough land had been tile drained, and beyond some closely cropped pasture and a few hay fields, all the former covert of the birds was under plow.

Big prairie, which when last seen was without a house for forty miles, now was all in corn or wheat. As a climax, a large lake where the writer at a previous visit had averaged nearly eighty mallards a day during a two weeks' shoot was a drained and dusty tract of land, which portioned among the neighboring farmers was making them rich with the crops it yielded.

Four of us and six dogs combed that country for ten days, getting only as many chickens as one man should have killed in a single day before.

Not only were the chickens scarce, they also were educated the same as the waterfowl. When a covey flushed, those not killed kept flying until they could find a rise of ground to dodge behind, then they would turn and still go on to be seen no more unless found another day, or else cackle in derision as they sailed into some eighty-acre cornfield, where all the king's dogs couldn't find them. Indeed things had changed. They say now chickens are increasing in those parts, and my friends write, "If there was only some place left for the birds to nest in, it would not be long before limit bags would be possible."

Don't blame the gun for everything. Don't legislate against it any more for a time and quit making a scapegoat of the old market shooters. Let the law provide a place of safety where the chickens can lay. Give them half a chance and like the waterfowl they will be found smart enough to care for themselves.

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THE MYSTIC CITY

By FRANKLIN S. DEWEY

A Busy Colony That a Woods Wanderer Found in the Solitude of the Northern Pines

EVERY night when the sun went down it hid itself early behind a long, lofty hill. It seemed to dodge prematurely out of sight, leaving the day to linger on. This hill extended a couple of miles from north to south and, as looked at from our cabin at the east, quite resembled a sleeping camel. Crowning its middle were two great humps on which grew just enough timber to soften the rugged outline, while the neck and head stretched away to the south and hid themselves among towering oaks thickly studding a broad plateau.

Early on a May morning, with gun and rations I set out to explore that hitherto mysterious mountain, for it almost deserved that name. By actual measurement it lifts its huge humps some six hundred feet above the little lakes that lie around.

The trees and bushes about its top I found too thick to permit a clear view, and I therefore clambered up the tallest topmost oak as high as it would safely bear my weight. Such a view as was spread out before me! The bright, fresh green of the treetops everywhere, the new needles of the tamaracks, and the springing grass in the broad marshes vied with each other in emerald tints, while everywhere, north, east, south, and west, were lakes almost bewildering in number, reflecting the deep blue of the great hollow hemisphere of the sky. I had never before looked on a scene so enrapturing. Loath to leave so entrancing a vista, I lingered long on my lofty sequestered perch, absorbed in dreamy wonder and admiration.

This peculiar hill is the most protuberant vertebra of the spinal column of Michigan. It is a sort of semi-medial-terminal moraine pushed up by the great glaciers of modern geologic time. Two powerful opposing and gradually diverging forces of ice have molded this huge monument to their memory. The bedrock that the glaciers slid on is several hundred feet below its base. Here are millions of tons of stones, sand, and gravel, almost every grain of which the old glaciers had stolen from Canada. One massive pudding stone of black and red jasper, gray quartz, and soapy chalcedony told the weird story of its long journey from its native bed away north of Lake Huron, while the little lakes spoke of sleeping peacefully in the very beds once occupied by vast lumps of ice lopped off from the nose of the melting glacier. If stones could only talk—and they can if one will only listen to their story—that old calico rock, looking for all the world like a big plum pudding, could tell us the history of millions of years. The lakes, too, could tell us much, but it wouldn't be about millions of years, just a few hundred thousand, something as old Niagara speaks to us.

But what is this stretching away off to the southwest? I had never set eyes on it before. It is an endless, virgin forest, grand and beautiful. It seems petitioning for exploration. The beckoning was irresistible. A half mile down the almost precipitous western slope brought me to a spring of water as sweet and pure as though it had been let down in silver goblets out of heaven. The tiny crystal stream crept cautiously away into the dense and gloomy woods, dodging this way and that, as if frightened at its own slender littleness.

I followed on as aimlessly as the stream itself. Other little rivulets just

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as clear and pure stole out of the deep solitudes and lent their scanty volume until, in an hour's walk, I was following a creek of no mean proportions.

A bevy of partridges suddenly whirred over me as if shot out of a cannon. I saw at once the cause of their alarm. It was one of the numerous wild denizens of this picturesque hill and lake region, a superbly beautiful red fox, the reddest I ever saw, and I had seen hundreds. His graceful tail, almost as big as his body, was nearly black and tipped with snowy white. Well might the fleeing partridges be terrified, for one of their family he bore proudly in his mouth as he arrogantly trotted near my place of half-concealment and bore his trophy hillward.

Introducing the Log in Evidence

At length I arrived at a sort of half clearing where only the large trees were sparsely standing. Here was almost a level plain. The creek which I had followed so far now crept sleepily into a broad, shallow pond of some half-dozen acres in which a few gigantic trees were standing like great blue-gray herons watching for their prey. The shadows of their limbs and incipient leaves were playing on the water, and here and there rounded stumps of trees poked their gray old noses up as if to sniff the woodland air.

The long walk had made me weary and hungry, and the midday sun and corporeal craving told me that it was time for lunch.

A small fallen tree lay close by the junction of creek and pond, and here I laid out my refreshments. I noticed something peculiar about that log I sat on. It wasn't old nor decayed; in fact, it looked as if almost freshly cut. The stump on which it had grown had a haggled look, as if cut with a small hatchet. So also did the log I sat on, while the half-trimmed top lay in the drowsy waters of the pond. A meager cluster of pussy willows partly shielded me from the noonday sun, and there, in the mute solemnity of that vast, unbroken forest, with nought of life save a catbird's chirp, I rested and feasted and silently contemplated the lovely quiet.

Peeping through the willows, I thought I saw an agitation in the water. One of the stumps toward the far side seemed moving. Is it alive and swimming? The glassy surface is in ripples. Now it sinks out of sight. What kind of ghost or hobgoblin of the woods could cause a stump to swim and dive? I began to suspect that I was dreaming, or that I had discovered a strange phenomenon.

I looked sharply about me. The swimming, diving stump was not the only queer marvel that I saw. The very prostrate tree I sat on had been haggled down; indeed, it had been haggled in twain and its limbs cut off by the same sort of dull instrument that severed its trunk. Logs were scattered here and there about the pond, and on exploring I found a dozen or more narrow, shallow canals or ditches leading from the pond out into the woods. Small trees had been cut for acres and acres around. Some of them, indeed, were not so small,—a foot or more in diameter. The limbs had been mostly cut off and taken away, and even the sturdy trunks had been generally cut into convenient log-lengths and many sections were gone. Some, too large to float in the shallow canals, had grounded in the scant water, and only deeper dredging or a higher flood could permit their floating to the pond.

It dawned upon me that I had discovered a beaver town. I knew now that the stump I saw swimming was not a stump nor a ghost, but a beaver. I went cautiously over on the other side and found what made and held the pond—a long, low, irregular dam built across the bed of the stream, and extending in either direction some hundred and fifty yards back into the woods. The water seemed tardily seeping through its entire length and gathering again in its old channel below the dam.

Many of the canals, approximately straight, led out into the woods a hundred yards or more, and most of the nearby trees had been gnawed down and floated away. In fact, the pond was like a great, sleeping, sprawling spider with his long legs reaching out into the

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dark and dismal shades. The dam was old and moss-grown. Decaying sticks and pieces of peeled logs were packed promiscuously with mud and sand and gravel and stones, holding back what seemed a considerable millpond of several feet in depth. Sunken sticks and logs, cords of them, some fresh and new, lay anchored on the bottom, half covered with mud and stones.

Here was the beavers' warehouse, their food supply when the long winter stops their work. Quantities of wood were sunk and anchored far below the reach of frost and ice, and the season's work had hardly more than begun. Here was their commissary department, their winter's store. When the snows are deep their work must be in large measure suspended. The frosts lock their canals and ponds and, like the human lumbermen, they must wait till floating time. Still they must eat.

Homes of the Burghers

Of still greater interest, however, than all the rest were their huts or houses. Like great haycocks, or diminutive old straw-stacks, they squatted around the margin of the pond. They were bulky piles of mud and sand and sticks and stones, mostly several feet high and two or three yards across, and so deftly interwoven that their homes were quite secure, especially in winter, even against the powerful paws of the great black bear. They possessed no architectural beauty. Their houses were made to live in and not to look on.

I searched carefully for the door to their huts. I found none. With a heavy club which the beavers had fashioned I pounded on the roof, and presently I saw a wake in the water. Not a nose was in sight, but under the water they were swimming away and seeking refuge with some neighboring family. Not a head came up for air, though I am sure they sometimes swam over a hundred yards.

I made the whole circuit of the village. I even secreted myself an hour or more and watched till the slanting rays of the descending sun were glinting on their liquid lawn, but no sign of life did I see save that animated stump that peeked at me through the pussy-willows at luncheon time.

This was indeed a deeply interesting place, a sort of bright oasis in the vast forest where the sharp teeth of generations of beavers had let in a flood of light. Here was a little village with its broad plaza, where its wise and orderly people had chosen the most propitious spot I had ever seen for a beaver's home. It was so hidden and secluded in the dense forest, and on such a straggling stream, that the early trappers and hunters seemed to have missed it entirely. The bears, of course, knew, and perhaps the glutton and the wolf, but the beaver is more cunning than they. His house is a fort. It is firm and strong. The front door is down cellar, and the cellar is full of water, and the front walk is a submarine passage to the great plaza, the pond. To break into a house is to find nothing, much pains and no gains. Their natural enemies soon learn this and let them alone.

I lingered long, loath to leave this curious, hidden town. The place was of amazing and luxuriant fertility. The great oaks and maples were giants of their kind, and stood so thick that the moss of many years, as if timid in this lonely place, clung fondly to their great, gray, shaggy sides, and finally rested in pillows about their feet.

The slanting rays of the descending sun now fell full upon the beavers' yellow, liquid lawn, which looked like a little lake of gold, and I would fain have lingered through their busy night, for the moon was at the full. It is then and in very early morning that the whole town is full of activity and business. I had disturbed them, however, and not a head would show till I was safely off their territory.

Just then a dozen great gray ducks settled themselves squawking on the pond, but they soon found that where beavers are there is nothing for them, and least of all is there safety. Their broad wings disgustingly slapped the unfruitful water and round and round they circled till over the tall treetops they descried some friendly lake more propitious for their evening meal.

Reluctantly I bid adieu to this em-

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bowered fairyland, promising myself that I would spend a night in beavertown.

A month went by; a month of weary waiting. My mind was much on the mystic city, like the young man's thoughts when first in love. 'Twas a long time to wait when there was so much for the waiting. Every day curiosity grew more strong and forced upon me an irresistible thirst for the revelations that might lie behind the curtain of the theater of the mermaids and the mermen. But I must wait for moonshine. For such an exploration one must avail one's self of every possible advantage. The moon was made for beavers and for their investigators, too. There was no perplexity about fixing a date. The moon did that.

Time for Another Visit

It was well along in the month of leafy June when the lazy moon got full. 'Twas Friday, the best day in American history. My anticipations and kit were also full. With gun, hatchet, hunting-knife, and eatables for a couple of days, I set out for the Mecca of my dreams. The weapons I took along by force of habit, or, perhaps, for safety against the larger animals. For comfort and possible contingency I took a light blanket and two soft deerskins. They weigh just a little more than a feather.

Another course was selected. I might find something new. It was longer, but I had plenty of time—all the afternoon. The woods were full of squirrels, fox, black, and gray; and every now and then a bevy of partridges sprang out of some obscure thicket, startled by the intruder. I heard a peculiar squawking, cackling noise off to my left. Curiosity led me as it has many another. There was a dense grove of very large oaks, and as I drew near I discovered great numbers of tall blue herons, apparently in great excitement, perched on the treetops, or flapping lazily from tree to tree. There must have been more than a hundred nests, and every nest with a quartet of crying, squalling babies.

There is nothing else on earth just like a heron roost, and if one has never seen the thing he can never know much about it, because it is indescribable. There is nothing more peculiar than a heronry, unless, perhaps, a pigeon-roost, where many millions blend their deafening screams. It will ever remain a puzzling question which has the sweetest music, the heron, the peacock or the guinea hen. Farther on I came upon a very large porcupine, who seemed to care no more for my approach than he might for a wandering goat. I probed him with a stick and he just humped himself into a big, round ball and waited for chances. Some think porcupines throw their quills. They don't. I've been much among them wild and have had them, big and little, for pets, and this throwing quills is a fable. A little further on I came stealthily upon an old mother deer and two beautiful, spotted fawns. It was in an open place and the sun shone full upon them. It was a picture worth looking at as they loped lazily over the hill.

It was well along in the afternoon when I found myself approaching the vicinity of the hidden city. To avoid any possibility of discovery I kept well aloof and stealthily approached from behind a thicket of bitter willows and hazel bushes. These were most admirably placed for my concealment. The trunk of a monster tree lay alongside them, and on the top of this, and nearly parallel, another tree had fallen, so that I could peek through between the two and view the whole village. I crawled along so very still that only a catbird, frightened from its nest, became aware of my approach. It was near sundown when I lay in comfort on the deerskins, peering through between the logs for the exhibition to begin.

My hiding place was not more than fifty yards from the pond, and the space between was stripped of all obstructions, so that the view was clear. I was also close to the end of the dam, and there was not a yard of all their territory that my eyes might not clearly survey. My supper was over and I was now settled down for the night. Everything was just as still as when I bade adieu to this quiet place a month before. It was almost a painful silence that hovered o'er the scene. I patiently watched and waited. Not a nose could be seen anywhere. I wondered if they were on a vacation

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somewhere. I was becoming impatient.

Presently I saw a wake in the water. Something was stirring. Up bobbed a head. It was a beaver for sure. Then four more little heads. It was an old mother and her babies out for a swim. It was a pretty picture to look on, those little ones out for a lark. It reminded me of the pranks of a brood of little fox kittens I had seen a few days before.

The sun had now gone down and the moon was just peeping over old Prospect Hill far away to the east. The sun and moon seemed on a teeter with the great world as a fulcrum. The moon was so bright and the sky so clear that the solemn woods lost every semblance of gloom. It seemed more wonderful than ever before to see the great silver moon sail through the dark blue depths. Old Jupiter swung close by the moon that night, while over on the opposite side of the starlit dome bright, smiling Venus was trailing the sun to rest. No night-bird's note nor breeze nor gentle zephyr broke the deathlike stillness resting over all. "How beautiful is night!"

With a great flood of light the moon now swept the glassy pond. The night was made exactly to my liking. Heavy rains had fallen a few days before, and the deep beds of leaves were full of water. The dam was almost overflowing. The canals and ditches were at their best. 'Twas a great night for work. Some hundred yards away I could see a half dozen lusty fellows tugging away at a fair-sized log like black ants around a resisting cockroach. A dozen others employed themselves in strengthening and building up the dam. I could clearly see them placing sticks and stones along the ridge, while some were apparently plastering these with mud. A few were working on the roofs of their houses, but most of them were lending their best efforts toward getting out the next winter's food supply. How very human it all was! Nobody was idle. Even a dozen little fellows, swimming and diving out in the pool, were evidently reciting the lessons their mothers had been teaching them.

There was one big fellow, larger, I thought, than any of the rest, who seemed to be a sort of superintendent or walking boss. I saw him coming down the opposite side to the farther end of the dam, and then he came along its ridge and stopped and talked with every laborer in the most democratic style. Finally he arrived at the end near me. Then he moved nearer, and I observed that he seemed to have a most peculiar gait, something like a huge rabbit clumsily hopping along. I could not but wonder what was the matter with the big fellow. Presently he came very near me, not fifty yards away. I feared I might be discovered.

Now he stopped, stood up on his hind legs, and rested against a small tree. On his hind feet he walked round it, examining it all the while, just as the choppers walk round the great pine trees to determine which way they best may fall. He evidently had something in mind. I wanted to ask him what he was thinking about. I wanted him to tell me why he limped and hopped along so queerly. He stood so near I could almost whisper to him. The moon was very high now and it shone full upon him. Only one paw was against the tree.

I saw now why the poor old fellow was lame. The left leg was only a stump. His paw was gone. He had had trouble some time. Maybe the leg he held up there had been frozen. More likely he had unwittingly walked into some wicked, fiendish trap and had suffered the pangs of hunger and weary waiting, till desperation drove him to cut the cords that bound him to a lingering death. I felt very sorry for the poor old three-legged gentleman as he hobbled down to the pond. From the way he romped and swam and dived and sported with his great-great-grandchildren it was certain that he cherished no sorrow for himself.

All night long, with no drumming of fingers or tweedling of thumbs, the work went busily on, but when the sun came up all labor ceased, and this scene of fascinating charm was still as death when I bade farewell to this mystic city.

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THE LESSER PRAIRIE HEN

By WALTER SCOTT COLVIN

ILLUSTRATED WITH PHOTOGRAPHS BY THE AUTHOR

A DILIGENT search through a number of authoritative books on American game birds failed to disclose anything about the Lesser Prairie Hen. Finally "A History of the Birds of Colorado," published in London, produced the following information: "The Lesser Prairie Chicken (*T. pallidicinctus*) should be looked for in southeast Colorado. It occurs in southwest Kansas and Oklahoma. It is smaller—wing less than 8.5—and paler and more bleached than the common form." So it can fairly be stated that Mr. Colvin deals with a little known game bird. Fortunately he found it in time. In a few years it would probably have been too late and the Lesser Prairie Hen would have existed only as a vague tradition and as the subject of three sentences in a book published for the edification of British sportsmen.

HAVE you ever been startled by the bomb-like sound of a lesser prairie hen rising from the tall bunch grass close at hand, sometimes warning you by a cackle? Again, before being noticed by the hunter, the bird may slip away silently out of range or with a head shot fly straight up into the heavens a hundred feet, either to fall back at the hunter's feet, or with set wings to glide away a quarter of a mile, or, if wing tipped, go bouncing to the ground, giving you a chase worth while. If you have not witnessed these things and many more antics of this noble bird, you have missed the king of upland wing shooting.

The natural habitat of this beautiful grouse is far remote from the habitat of its allied cousin, the heath hen, and still less remote from its nearer cousin, the common prairie hen of the middle States. Its present confine is the southwestern counties in Kansas, extending west from Meade, through Seward, Stevens, and Morton and north into Stanton, Grant, and Haskell, crossing the line into Colorado some fifty miles, extending south through Beaver, Texas, and Cinnamon counties of Oklahoma, into the pan-handle of Texas, but how far south and east I haven't sufficient data at hand to determine, although I believe it is safe to assert that they do not extend farther south into Texas than two degrees by air line. In northwestern Oklahoma I have seen the chickens within a few miles of the New Mexico line.

Formerly this variety of chickens was common in Woodward County, Okla., and Captain Bendire, in his Life Histories, mentions securing their eggs near Fort Cobb, Indian Territory, in 1870. At that time reliable information goes to show that they were far more plentiful south of the great Indian highway than north. The pan-handle is a typical bunch-grass country, and during the early eighties a great prairie fire broke out in its southern extremity, sweeping north to the narrow strip of short grass land in "No Man's Land," where it died. The chickens that were driven north found an ideal home in the rolling, sandy bunch-grass country that abounded just across the line.

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SHORTY AFTER A CRIPPLE

Their range in its entirety would probably cover no greater area than a fourth of the State of Kansas, and the most abundant nucleus is in Stevens and Morton counties. Here they are quite plentiful in its sandhill and bunch-grass fastness, where, in the fall of the year they sometimes gather in flocks of several hundred birds, roaming where they will, a typical bird of the long-grass country.

My first acquaintance with this pale variety of the pinnated grouse took place in the spring of 1906. The previous fall my younger brother sent me the skin of a bird which he killed in Texas County, Oklahoma, for identification. At a glance I realized that it was the rare and little-known *Tympanuchus pallidicinctus*. The following spring found me on the ground to study their habits and if possible to secure their eggs. For

IN THE BUNCH GRASS LAND

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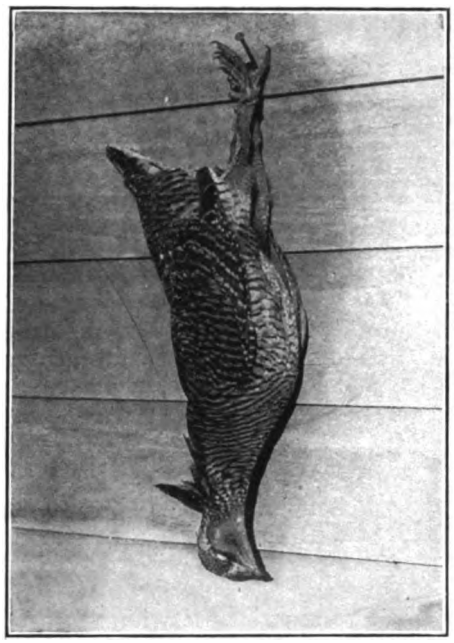

A COCK, LESSER PRAIRIE HEN

several days I tramped many miles across the hot, blistering sands of Seward County, Kansas, often flushing cocks, most generally in twos and threes, and as they appeared quite plentiful I felt sure that the hens were nesting close at hand. Through the efforts of an old-time trapper, Mr. Ed. Ward, I was successful in securing a set of thirteen straw-buff colored eggs. The nest, a mere hollow in the sand, was lined with a few grasses, and was situated under a tumble weed which had lodged between two tufts of grass on the north side of a sloping hillock. The sitting hen allowed us to approach quite close before taking wing.

Mr. Ward informed me that the nests were almost invariably placed on top of a rise, or on its sloping sides. The nests, though usually placed in open situations, are extremely difficult to find owing to the dichromatic arrangement of the feathers, which so harmoniously blends with the surroundings of the sitting bird. A far greater protection to the sitting hens is their non-scent-giving powers during the nesting season, which was fully demonstrated the following spring, when I again visited that vicinity in order to secure a series of photographs.

In company with one of the best-known chicken dogs, I thrashed over several sections of bunch-grass land where chickens were common and known to nest each year, but without success. I found no hens off the nests during the heat of the day, but quite frequently saw them flying to the feeding grounds after twilight. Several times while hunting their nests I felt sure that I was within a few feet of the sitting birds, but was compelled to give up the search. The hens are close, hard sitters, and very few nests are found. Prairie fires expose many nests and are the nesting hen's worst enemy.

The nuptial performances of the cocks are similar to those of the common variety, but the ventriloquial drumming sound does not appear to be quite so rolling nor voluminous. In May, 1907, I put up in the heart of the nesting-ground, where I had an excellent opportunity to study their habits. The cocks generally select for drumming-ground a slight rise covered with buffalo grass, where they gather each spring for the nuptial performance. They are very par-

THE AUTHOR WITH A GOOD BUNCH

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tial to their drumming-grounds, and even though disturbed will return to their old haunts year after year. I saw one drumming-ground that had been used for many years.

Here the cocks would gather sometimes as high as fifty birds to perform their antics. The drumming of so many cocks would be of such volume as to sound like distant thunder. Hens attracted by the drumming would cause disturbance. Cock fights and a general all-round rumpus would begin. A great deal of strutting and clucking would be done by the males. Finally, when, with lowered head and wings and air-sacks full, a successful cock would drive his hen from the bunch, peace would reign again, and the drumming would be resumed.

In general characteristics and make-up the lesser prairie hen is of a sturdy, robust nature, being some two-thirds the size of the common prairie hen. They are veritable dynamos of "git up" and energy. Such vivacity and activity I have never seen displayed in any other game bird. On a cold, snappy day they have the life and energy of half a dozen quails, and for speed they put their first cousin to shame. A full-grown cock, well fatted, will weigh from a pound eleven ounces to a pound fourteen ounces. The plumage is of a much lighter brown and is more suffused with tawny than is the plumage of the common prairie hen. During the summer months they feed largely on grasshoppers, but in the fall and winter they feed almost entirely on kaffir corn and maize, cane seed, and other varieties of semi-arid cereals. As to the palatableness of the meat I much prefer duck.

NEST AND EGGS OF LESSER PRAIRIE HEN

Though naturally a lover of the free range, during the winter they rely largely upon the farmer and rancher for their food. A large amount of grain is consumed by the flocks as they roam from one grain field to another. In the eighties a man by the name of Hatch nested in the sandhills just inside the Kansas line in Seward County. Here he planted a grove of black locust trees and spread out his broad fields of maize and kaffir corn. The Texas bob-whites, mountain quail, and lesser prairie hens soon learned that this man was a friend of the birds, and straightway made it their rendezvous. Here, each fall, the chickens gathered by the thousands, and each spring spread out over the vast prairies, nesting and rearing their young. In the fall of 1904 my brother estimated that he saw in a single

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OUT ON THE ROOSTING GROUND

day fifteen to twenty thousand chickens in and around this one grain field. Though timid if persecuted, if unmolested they become quite tame, coming to the barn lots to feed, and will put as much confidence in man as quails when protected.

The cold north winds had cast an icy mantle as far south as Santa Rosa, New Mexico. People dwelt in ice-houses, trees and shrubbery resembled inverted chandeliers, and everything creaked and sparkled with its burden of ice. It was a cold October in 1906. The storm raged four days, and when it had warmed up a little Brother Dillard and myself started after chickens. In a cane field near the State line we saw a flock of five hundred or more, and when they arose it seemed that a hole had been rent in the earth. I was for stopping and shooting a few, but Dillard said:

"Come along; those are only rovers. I'll show you some chickens when we get up in the State."

Two miles farther along we came to Ed. Ward's. He informed us that there were a "few" chickens in a cane and kaffir corn field a quarter of a mile east. We flushed several birds from the tall bunch grass just before we reached the field, which were promptly despatched; however, in the field things became more lively. Such a sight I have never seen before nor since. Chickens were flushing everywhere, and droves of fifty to a hundred would take down the corn rows, sounding like a moving avalanche as they touched the blades of corn. Still birds were quite wary, and the only good shots were to be had over the dog.

Soon my bag was full, and I stopped to watch the finest and the brainiest dog I ever saw—old Gus, a half-breed cur and Irish setter, raised as a pup in Woodward County, Oklahoma, where chickens were plentiful. His points were wonderful, his retrieving sure and effective, never losing a trail or a bird. Seemingly almost human in his understanding powers, I well remember, after trailing a lone cock some two hundred yards before coming to a point, I missed the bird clean aft when it arose, and Gus about faced, eying me curiously, as much as to say, "You darn idiot." A little farther along, when I missed a second bird, he gave me up in disgust and went to work for the other boys.

As we thrashed back and forth across the grain field, the chickens arose in flocks of fifty to five hundred, and generally sixty to eighty yards distant, making shooting difficult. The majority

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RALPH IN A CORN FIELD

of the birds, after being flushed, would fly back into the field, while some would go to the bunch-grass covered hills half a mile away. Mr. Ward and I estimated that there were from three thousand five hundred to four thousand chickens in this one field, a sight never to be forgotten. It was icy cold when we wended our long way homeward in the gathering dusk, but we had been well paid for our shivers. With game bags full and memory-pictures that time can never erase, it had been our day, a day fit for the gods.

A few years had slipped away, and again I was in the home country of that diminishing race, as each fall has found me since. When in company with Emile Hall, "Shorty" Eblen, and Ralph, my youngest brother, as our auto bowled along at a lively gait across the windswept, sand-blown prairies, I noted the absence of the chickens from their favorite haunts. With advancement of the settlements this bird of the free range, had moved farther west into Stevens and Morton Counties, but were not to be found so plentiful in numbers as in years gone by. Finally we stopped the car at the edge of a kaffir cornfield where signs looked good.

Several chickens arose from their roosts in the bunch grass and some good shots were made. By the commotion in the cornfield we knew that "some" chickens were close at hand. Starting down the corn rows several hundred chickens arose, each hunter making a bag, though Emile had to make a hundred-yard dash to get his crip. Advancing over a rise, I saw a large, tawny wolf making its exit from the far end of the field—the real cause of the commotion among the birds. The chickens streamed in large flocks to the brow of a hill a mile away. Rounding a knoll, Ralph and I flushed two cocks. Ripping a wing off of the one I shot, it turned several somersaults, hitting the ground feet first, and at a two-forty clip started for a canefield.

Over the barb wire fence I jumped and down the sand rows I ran after that "chick," and at seventy-five yards won. Going across a tableland, Shorty picked up a couple of stragglers. Emile got a head shot on a cock, which rose straight up into the heavens some two hundred feet and setting its wings sailed away a quarter of a mile, and fell stone dead. Some time later Ralph took the lid off by smashing five straight in about thirty seconds. This was remarkable shooting inasmuch all shots were straight, clean kills. The birds had fallen in a semicircle of 180 degrees, which meant five

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different positions for the shots. It was getting near five o'clock and chickens were coming into the fields to feed, but in the growing dusk shooting was an uncertainty.

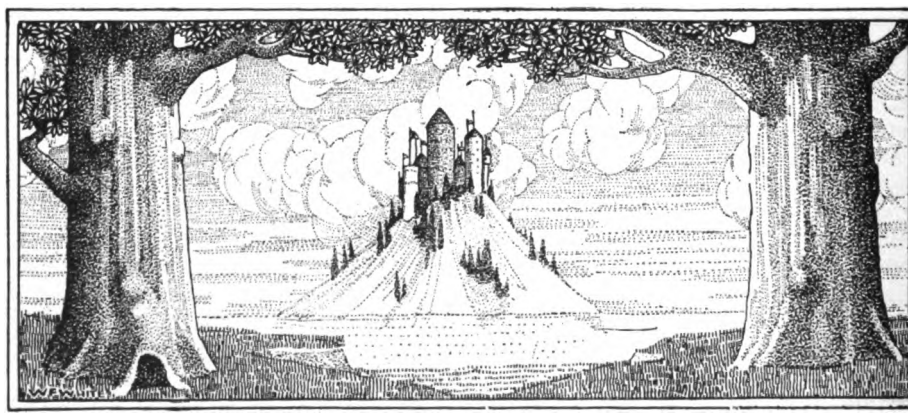
Gathering our duds together, we started for our long journey home. A few clouds, fringed with gold, freckled the western sky, and over all a red mantle was cast while the sun slowly lowered to the horizon. My mind went back to the events of the day and to the time when the chickens were more plentiful, and I realized with a shudder that we were nearing the sunset life of the king of upland game birds. But the decrease in their numbers is not due so much to the gunners, as gunners are few per capita in those parts, but is due largely to the cutting up of this vast wilderness into small farms. The bunch grass land cannot be mowed for hay, therefore, in such land the chickens have found an ideal home in which to rear their young and harbor themselves during the winter. Such land is soon destroyed by cultivation and small pastures. With the advancement of civilization the flocks scatter and become depleted.

The moon came out and cast her cold smile through the icy air. Nothing stirred; no sound save the hum and exhaust of the motor.

"There will be plenty of chickens here ten years from now," Ralph said after awhile.

"You'll be lucky to find a few chickens to shoot five years from now," I replied, and that is the truth.

"The Death of a Forest Giant" by Rufus Steele, is a story of the fall of one of the California Giant redwoods. It is a graphic story of the end of a tree which was probably a sapling a thousand years before Christ.



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DOWN THE SLOPES OF THE MOON

By M. A. SHAW

How Two Men and a Canoe Conquered the Rapids of a Northern River

I LAY back in the canoe. The sky, heavy and gray, seemed very near; the roar of the first fall, six feet straight over rocks, was full in my ears; and right up the bank in front of me, with those unmistakable signs of human travel, the portage led off between two trees at the top. What was beyond them?

"There are rapids as far as I can see, and I've been down past two." So Roger, my tenderfoot companion, looking little and low between the big trees, called down to me.

I took up the hill and over the portage, all eyes on the water. Three times after its first fall, the river broke into rapids. Two of them were white. The first of the three was spread water and ran black from me to the farther shore. That would be easy to run; standing in the canoe, one could dodge the boulders, I thought.

When I came to the next it floored me quite. A quarter of the way over from that far shore, the river was drawn into a channel twenty feet wide straight for me, was thrown white against my side, and was off at right angles down forty yards of foaming water.

Not the whole river, though. That plunge against my side split the rapid into two parts, both boiling, by far the larger white and rushing off downstream, the other black and really flowing up, on my right.

It seemed as nasty for running as could be; we should have to make the long carry, in spite of everything; with a slow heart I got to the portage to see what was farther down.

Three-quarters of the way over, the path came upon it all at once: a straight run of white water, one hundred yards long and full of jumping cups — the whole thing plumb up against a sloping rock. A little over half its length it swerved from left to right in a long sheer, swept the shore a bit, and, before taking its final rush thirty yards to a lake below, fell a foot or more to rise in an eternal curl of white.

I looked long and longingly at this broad ribbon sloping away from me, white, wavy, and full of kinks. But I thought of my tenderfoot companion and of the fact that though I knew a canoe better than my A B C's, I was quite inexperienced in white water. I went on down the portage, knowing that it would not do.

The heel of the day was coming, and we had worked hard; the energy was small, the spirits down; moreover, a lowering sky threatened rain at any moment. But even as downhearted thus I went with my reason dead set against it, I knew all the while that the long chute was tugging at me like oxen with strong ropes. In this mind I came the full mile's length of the portage and started back.

Then I knew for the first time that I had been swallowed up in a big woods. Somewhere on high, for I did not look up, I guessed there was a roof of green; down with me, though, in darkness almost, and in silence, there was only a

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naked, rusty bottom, stuck thick with hemlock boles.

I looked again at the long rapid in despair and came to the one with the right-angled turn. It was setting up what in my anxiety on the way down I had not noticed—a great noise, that seemed to carry in all directions a little, and then, against the overpowering solitude of forest and heavy sky, somehow to go quite dead. And here, like a flash, it came in on me that if I could get my companion to hold the stern, I should run those rapids; more, failing that, I should run them myself.

The Call of Danger

A wave of unaccountable courage! That was it. I could not trace it directly to anything, did not try much—that sudden ardor of the blood, mother of my impulse. Maybe a memory of climbing at night, by a dwindled moon, the high ground-swell of Lake Huron was in it; maybe a feeling that here I had met somehow a supreme test for myself. But chiefly for me it was, that's all; and with it I knew I had climbed a rung in life to a finer view. And I do not know that I ever had a pleasure quite like that which moved me now with this sublime irrationality in risking my neck for—fun.

In high spirits, I bowed low to the rapid-hung river; I twiddled my fingers at it as the best of friends may; then I made off for Roger—Roger, on whose long, oddly furrowed face, solemn as a judge's, a new tan was driving back a deathly pallor.

"Are you game?" I asked, soothing out the whole thing to him.

I should not have been surprised had he said no. We were different. I was at home in a canoe, he was almost a greenhorn; I had the open and a pipe, he had a wife and child. But he had insured his life and made his will before coming a thousand miles to trail the north woods with me, and something in my plan must have touched an eerie strain of adventure in him.

"Well, I'm with you, if you think it possible."

It had the sound of a death sentence; but I thought I saw the ghost of an old light in his eye.

"You've some rudiments of the art of living, Roger. Come on!"

The spread rapid was easy; I took it standing, with only one rub; then we headed for the right-angled turn.

My plan was to be drawn straight into it so as to strike bow-on the black water with its up-stream flow. The whole thing depended on this; and as we were sucked toward it, beyond turning back, I saw that the stern was being drawn into the swifter, stronger current of mid-river—that instead of the whole canoe riding the black back current the greater part of it would be hurling down the white water, stern first. One stroke of a skilled canoeist in the stern would have righted us; but there was no skill there for that; so I kept mum, and Roger did, too.

At the crest of the rapid, we were diagonally across. By the time the bow had made the black water the stern was sweeping down. There was just one chance and I took it—I might hold the bow on the black water; if we were not swamped in the turn we might yet be right. Down went my blade; I sculled and drew for my life. It held. The stern swept round and struck, and when I turned my companion had dropped his paddle and was hugging shore.

I was not surprised at the wild look on his face; I had some idea of his crack-the-whip swing on the white part. Moreover, I was kneeling uncomfortably deep in water.

It was a close shave. If a half hour before I felt a vague suggestion that something friendly ought to come to me from the trees, I had not the least doubt now about the nature of the hand that reached up for us out of that river and missed us by a hair. And at thought of the sociable one I had thumbed at it from the bank I laughed loud out.

In all reason we should have carried our canoe over now; what we really did was tackle the thing again. Twice more we faced it, and each time I saw, before it was too late, the mid-current slowly drawing us in.

Then I got into quiet water and turned the Moon River into a kinder-

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garten in the art of canoeing; and when Roger could pull the stern over without immediate danger of upsetting, we faced the rapid for the fourth time, slipped on to the black water as if it had been a quiet haven, and there almost stopped still. Just over the side white water was tearing the other way.

Along that black path we crept gingerly; then, where the water, with its impact on the shore, seemed to be boiling forty ways, we dared on. All the bubbling and swirling was just over each side. I could see every bubble, every round of the swirls. I thought I heard the thousand different noises of their breakings and movings. Dampness, like a thin spray, came cool on hands and face.

The paddle did not seem to hold—had no purchase. The canoe was always moving but getting nowhere, with a suggestion to us of a bronco, bucking sidewise; and all the while we dug into the white water almost as if we were hitting air. Then a boiling mass caught us right. We shot into the current, sat up with a shout, and let it go.

Without a stop for breath we made for the next one.

"Down the center, Roger," I cried, approaching it.

"The center; aye, aye, sir!" and I knew from his tone that the uplifting and clarifying spirit of play had seized him hip and thigh.

Then? Then, to our leaping lives, there unrolled itself over the bow of the canoe that charming long, white slope.

"I know, I know; I've been down there many a time 'hell bent for election,'" said a river driver, when out at the bay I spoke to him of this rapid.

I would not put it quite that way—in print; but if the reader has gone down one of those water toboggans we went just like him—and the river driver, I guess; and that's about all there is to tell.

I was not aware of thinking about or willing my strokes; the full way down my paddle got from side to side with a swift and sure intuition, as if, for the occasion, brain cells had come down to the muscles. It nosed the boat, now to the middle of a cup, now to one side, now to another; and all the while I could catch the shore and the forest sliding by the other way.

Then we struck the sheer, but already the paddle was a far out, slanted leeboard, heading the bow for the jump with the eternal curl.

Straight for the center we dove. There must have been four or five feet from top to toe; for the bow did not rise to the curl, but shot in a quarter of the way up.

When the splash took me fair on the breast and head there was that in me which could have laughed uproariously. Only the fun was too thrilling for laughter, and I was still shut-lipped and glued with hard intent on the white water and the bow shooting down the cup-filled river, when, in a pouring rain, I heard Roger from the stern lifting up in triumph his voice on high.

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THE NEW ATHLETE

By DEAN LEBARON R. BRIGGS
President of the National Collegiate Athletic Association.

THE article which follows is the presidential address at the opening of the eighth annual convention of the National Collegiate Athletic Association in New York, December 30th. Dean Briggs, who is better known as the dean of the Harvard Faculty of Arts and Science, has been among the foremost friends of clean college sport for years. An idealist, his standard is high; a practical administrator, his methods are direct and simple and his logic irrefutable. OUTING and its readers are deeply in his debt for permission to print the address which follows.

AN experienced teacher in a preparatory school remarked the other day that he was an ardent admirer of the modern boy and young man—"a new type," he declared—which is "far ahead of the new woman"—and a type developed by athletic sport in general and by football in particular. The father of that fine young player, Captain Storer of Harvard, tells of a man who talked to boys from the text, "Ye shall know the truth; and the truth shall mark your face." He believes, if I understand him, that a young man who has played football may often, if not always, be recognized by a certain manly frankness which is fostered in that game.

Now, whatever marked the faces of football players twenty or twenty-five years ago—whatever, I mean, beside the physical blemishes tendered by the game—it can hardly have been the truth. Manly courage football fostered; manly frankness it did not, though some splendid fellows passed through the fire of it with nothing worse than a singeing. Some players showed frankness amounting to naïveté in practices by no means truthful; I shall never forget the appreciative satisfaction with which one excellent fellow told of another whose peculiar talent for the game (he said) was in holding his adversary so cleverly that his adversary appeared to be holding him.

No wonder this practice was approved, for—if the testimony as to those days is even approximately correct—it was relatively venial if not praiseworthy. The early football players, like the heroes of the Old Testament, Jacob and King David, can't be measured politely by modern standards. When inclined to look at the dark side of college sportsmanship to-day, we may well remember those years of barbarity and rancor and low cunning, not universal, but so general as to mark the face of the game if not of the player. Even out of those years emerged men who set behind them the trickery and the ill-will, retaining the courage and that wonderful capacity for standing fire which belongs to him who has been put to his uttermost before thousands of men and women—thousands that it is his business, though he knows they watch him breathlessly, to ignore while with heart and soul he plays the game.

Some of those earlier players it is hard to conceive of in any indirect act. Such was the late Albert Holden, whom I can see at this moment dashing down the field with the brilliancy of a cavalry officer leading a desperate charge. In him sincerity was an overmastering force; but to men of less strength, to boys whose principles were still fluid, those days were dangerous indeed; and if even out

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of those days came kindly and honorable men, no wonder that to-day the football type is one of the finest we produce.

For sportsmanship in American colleges (at least in those of which I have a right to speak) is visibly and constantly changing for the better; and the change feeds and accelerates itself, since it is substituting for mutual distrust the assumption that the other fellow is a gentleman, and since nothing is so likely to insure his being a gentleman as assuming that he is one.

I am not living in a fool's paradise; the millennium has not come: but things *are* better than they were. When I contrast the Yale-Harvard games that I used to see at Springfield with the Yale-Harvard game of this year, my confidence in the future of college sportsmanship grows strong. I wonder how many of us elders who sit in judgment would have behaved as well as those ardent, high-strung boys. When we consider the intensity of feeling, the constant and by no means gentle bodily contact, the nervous strain of men trained to the breaking-point, the whole American world looking on, and a good fraction of it *there,* the self-control of the players is little short of marvelous. No doubt a hundred objectionable things might have occurred in that game unseen by me; yet my belief that the game was the cleanest I ever knew is supported by men whose football eyes are sharper than mine.

Decency from Discipline

This gain in sportsmanship is no more moral than economic. With improved officials, slugging and other breaches of courtesy have ceased to pay, have accordingly become rarer, and, having become rarer, are, when they do occur, more noticeable. The player who is guilty of them is no longer the normal athlete, but a man marked in the sporting world as no gentleman, or, at best, as an irascible gentleman who imperils his own team. All this has a moral effect; for however much men ought to be above sordid considerations of reward and punishment, they are not, and without these sordid considerations we might subject our students to what President Eliot calls "too great a strain on their higher motives." Appeal to chivalry, but strengthen the appeal to chivalry by enforcing decency. See that men who, however unacademic their appearance, represent institutions of culture, shall not openly and without public censure offend against fair play.

One of the games in which such offenses are most conspicuous and most gratuitous is baseball. The ethics of professional baseball is no subject for us except as it affects the ethics of college baseball. The public, though it sometimes censures the brutal professional player as dirty, is so callous to anything short of brutality that good players—and good men—regard it as part of what they are paid for to unnerve an opponent by fair means or by foul. Men and boys have come to think of this unnerving as a great point in the game, with which it has no more intrinsic connection than with any other game. It thrives in baseball, under cover of that legitimate shouting into the diamond whereby a player coaches a baserunner.

An ingenious coach finds no trouble in blending nominal advice to a friend with vocal attacks on an adversary, and his example is followed in some cases by the whole team. Such a coach may address a baserunner with connotations intended for the pitcher, while the umpire, who cannot afford to rise above public sentiment, stands idly by. A player—so strong is the illusion that anything to rattle an opponent is legitimate baseball—may hold an opponent up to ridicule before thousands of spectators; a catcher may gibe at the batsman in plain hearing of the umpire, without one word of efficient rebuke.

A year or two ago a Senior in Cambridge was taken out of the second team and tried in the first. As he stood at the bat the visiting catcher kept up a constant fire of "Weak hitter! Weak hitter!" Not long since the marriage announcement of a college pitcher came out just before an important game. In that game batsmen persistently chaffed him about his engagement—doubtless to draw off his attention and to increase his difficulty in finding the plate.

As you see, I am not citing the worst

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things men do; nor am I questioning the right of any player to an occasional spontaneous remark; nor am I denying that even in baseball things are not so bad as they were. I am pointing out cases in which players who should be gentlemen show that, for the time being, they are not, and receive no public rebuke for contemptible public conduct. Repressing such conduct by law will not transform the spirit that prompts it, but will create—in time—such a habit of decency as shall restore in some degree the student's sense of proportion—a sense of proportion that many a youth who is not radically unfairminded has lost.

To-day we are to have a report on ridding baseball of some objectionable practices. What that report will recommend I do not know. Quite independently I make a suggestion which I hope nobody will discuss till we have heard the report. In college games instruct the umpire to stop those pettily mean tactics which are no more essential to baseball than jogging a rival's elbow is essential to archery. Football may be a profane sport; but when one considers the fierce and constant physical contact which it involves, it is, in some respects, better-mannered than baseball to-day.

What I have said is an old story, regarded by some persons as that brainless conservatism which would stop an express train by putting a hand on the track, or would pit against the lusty garrulity of athletic youth the futile garrulity of a "back number." Yet what is this Association for, if not for improving college athletics and fostering in college rivals a spirit of friendliness that the fires of a fierce contest are powerless to consume? It is so obvious that modern baseball misuses the mouth and abuses sportsmanship, so obvious that part of an umpire's duty is to see fair play, so obvious that the normal youth loves the generous, hates the trickily mean, and need only open his long-closed eyes to see that there is nothing legitimate to baseball which will not suffer a player to remain a gentleman.

We are only delegates, it is true, not plenipotentiaries; but unless our combined force can in some degree leaven American sport, we have no excuse for meeting. I discuss but one game and make but one suggestion; yet the principle of that suggestion applies to all games and to every contest. There was some terribly bad sportsmanship in the Presidential campaign last year. There is terribly bad sportsmanship in many—if not most—elections, whether of officers at a school or of rulers for a nation. Every little we can do to make clean our national game helps our citizens to make clean the greater game of our national life, for clean sport means honest men.

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REDSKIN VENGEANCE

By CLARENCE O. SACKS

A Tale of the Days When Sitting Bull Called His Tribesmen to the Ghost Dances

ON one of those wild Dakota nights when the wind bites through to the bone I sprawled before a comfortable fire in Jasper Young's log shack. It was a rare occasion for frontier tales, so we talked of Bridger, Nelson, Carson, and other Indian fighters, of "Wild Bill" Hickock and the feud which led to his death. Then we were silent—each busy with his thoughts.

Jasper, sitting on the edge of his bunk, gazed at the hearth—a habit he had when recalling other days—the flames lighting his face and grizzled beard, bringing the rugged features into sharp relief against the darkened wall. After a pause he spoke.

"Vengeance is a queer thing, ain't it?" muttered the old plainsman, still thinking of "Wild Bill."

"Yes," I replied tersely, for I knew his moods.

"But a white man's revenge ain't nothin' to that of a redskin. No, sir, an Injun never forgets a wrong—never! I've knowed savages that would wait years to git square. I've seen 'em kill their own to wipe out a grudge."

Jasper lighted his pipe, puffed contentedly, and held the match until it had burned itself out.

"Take, for instance, the fight between Bull Head and Sittin' Bull; that was an Injun's idee of evenin' up. I lit right into the middle of that muss, and when it was all over we chucked Bull Head and Sittin' Bull into the same amb'lance. The debt had been paid, but one of 'em was dead, the other ready to go on the long journey. Yes, sir, if it hadn't been for Bull Head's grudge the Gove'ment wouldn't have got old Sittin' Bull quite so easy that time I mean.

"That scrap out on the Cannon Ball River had its beginnin' in a silver medal—you've seen them big pie-plates the Presidents used to give the tribe chiefs for bein' good? Well, this feller Bull Head owned a medal presented to his grandad 'way back in Jackson's time. It was worth, I suppose, about thirty dollars, Mexican. Sittin' Bull let on as how he'd like to trade for it. The young Injun agreed to swap for ten ponies, not because he wanted to, but because a gentle hint from the Sioux leader was as good as a command.

"Most folks speak of Sittin' Bull as a chief. He wasn't a chief, but a medicine man, high priest, and prophet, and as such was twice as powerful as a tribe leader, and outside of Gall, I guess he was the greatest man the Sioux nation ever produced. So, you see, when he hinted that the medal would look good pinned to his war-shirt, the young Injun was forced to trade for the ponies.

"Two or three nights after the dicker the ponies disappeared from Bull Head's herd. The hosses was clean gone, not hide nor hair of 'em left. Bull Head got the notion that through some hocus-pocus the medicine man had took 'em, and knowin' redskin nature as I do I should say Bull Head was about right.

"Now, bein' that Sittin' Bull ruled the Sioux with a rod of iron, the young feller couldn't make no holler, so he just kicked himself a couple of times, cussed a bit, and got consolation by figurin' out that he would get square—and, take my word for it, he did. From then on there was bad blood between them two Injuns, for hoss stealin' was the worst crime on the calendar in the old days.

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"Soon after the trouble over the medal Bull Head quit Sittin' Bull's camp and j'ined the Injun police. Whenever a redskin got sore or was lookin' for good grub, an easy job, and ten dollars a month, he mustered into the police. There was lots of renegades, Crows and Pawnees, enemies of the Sioux, in it too. All that the police had to do was to keep order on the reservations, prevent the sale of likker, and act as guards on ration days. It was a easy job, 'specially for them that could toe the line.

"I often think that Bull Head j'ined in hopes that some day he'd get a whack at his old enemy.

"Well, sir, nothin' much happened until about eighteen months later, when the Ghost Dances came along. Some calls it the 'Messiah Craze,' and I reckon they're right, for if ever there was a crazy gang of Sioux it was them that trapsed up and down these parts durin' the last uprisin' of the hostiles.

"The buck that started the Ghost Dances was a schemin' Piute medicine man out in the Nevada country, though Sittin' Bull often gets the credit for inventin' that entertainment. This Piute was took sick and while down with the willy-horses imagined he made a trip to the happy huntin' grounds and had a pow-wow with the Great Spirit. The old-time Injuns was great hands for dreams. They had 'em of all kinds and sizes accordin' to the trouble they wanted to start. When this Piute came out of his trance he allowed that the Spirit told him that the whites was to be driven back into the salt seas and all the lands and the buffalo and elk were to be returned to the Injuns.

"In order to get ready for the round-up, the Spirit had said that the Injuns must have feasts, songs, dances, and the like. All this stuff and nonsense was doped out by the Piute, and, bein' a smooth article, the poor red critters believed every word.

"I'm tellin' you all about these dances because that's how Bull Head got the chance he'd been waitin' for.

"It wasn't long before the Messiah Craze spread like a prairie fire, from the Rockies to Pine Ridge, and I'm here to tell you that the dances was bread and molasses to a sly old fox like Sittin' Bull. He took hold of the business like a rattler jumps at a toad. It's fair to say, though, that the dances came at a time when the Injuns was gettin' a brace deal from the bottom of the box. They'd been robbed of their lands, their treaties was broke every time, and they got about half the rations the Gov'ment sent 'em—they was restless, uneasy, chock full of hate, and ready for the preachin' of the troublemakers.

"Sittin' Bull played the thing up in great shape and he had the redskins frothin' at the mouth until they was fixed to wipe up the ground with the whites. It's a funny thing, but the Piute that begun the dances soon petered out. With the Sioux medicine man it was different. He was a great orator and his word was law. One hour's talk with him would galvanize a hull tribe—dogs, ponies, and, by ginger, even the children got the fever.

"Before long the dances was goin' on full blast. We'd be ridin' at night, and you could hear the war drums throbbin' on all sides. It wasn't safe for white men to travel in less than pairs, finger on the trigger and an eye over each shoulder. Bands of young bucks would swoop down on a settler and steal everything that wasn't dug right into the soil. It made life interestin' and kind of brought back old times to those of us who'd been in the Sioux mixups of '63 and '64, and every night, before we turned in, we'd feel our knobs to see if our hair was still on.

"Natu'lly peaceful folks didn't like the notion of bein' scalped, pot-shotted, and losin' their chattels, so they set up a howl that finally reached the War Department—sittin' in nice easy chairs 'way off in Washin'ton. The Department woke up and took notice that the Sioux was gettin' a good start for a general uprisin'. So it was decided, offhand-like, that the hostiles must be put down.

"There was two ways of settlin' the trouble. One was to send out the cavalry, force the fight, separate the different bands, and beat 'em in detail. It meant many bloody battles and maybe

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another Little Big Horn affair. The whites would win, of course, but many a poor feller would cash in before it ended.

"The other plan was to fix up some contrivance for catchin' Sittin' Bull. Everyone knew that if Sittin' Bull could be put behind stout iron, with bracelets on his wrists, the canker would be cut out and the disease cured. It was a good plan, but somethin' like tryin' to find a wood-tick on a long-haired maverick. The puzzlin' part of it was—how to get the medicine man? If a regiment was sent to capture him his runners would see the soldiers comin' four or five miles off and by the time the troops could get up nothin' would be left of the hostiles' camp except a few sticks of burnt wood and some puppy bones. They might keep on playin' tag for years without callin' quits.

"Well, sir, somebody got the bright notion that the Injun police could do the job—like settin' a thief to catch one. The police was just the kind that knew how to wiggle into a camp and get away with the prisoner without much fuss. It was only a question as to whether the police would remain true to the whites. Most of us thought they would, for we knew the stuff that was in 'em. So, before long, General Ruger, the Division Commander, sent orders to the K. O. at Fort Yates to 'secure the person of Sittin' Bull.' The K. O. was told to call on the Injun Agent for enough police to do the fine work and the military was to back 'em up.

"The plan worked out pretty well—all things considered.

"The day the order for Sittin' Bull's arrest arrived I was at the fort along with three other scouts, all of us workin' for the Gov'ment. The commandin' officer got goin' right off the reel and had forty police sent over from the Agency.

"Who should be in full charge of the outfit but Bull Head! Talk about luck! Here he's been waitin' nigh onto two years for to get square and Providence, fortune, or whatever you're a mind to call it, puts four aces right smack in his hand.

"I'll never forget Bull Head's grin when he came ridin' into the fort at the head of the outfit. I seen him the next mornin' wearin' a smile,—only a little tighter at the corners of the mouth. He was just tickled to death when he held up his hand in greetin' and he sprinkled '*waschta*' between every word he uttered, which is pretty much like sayin' 'good' in white man's lingo.

"The officers held a council durin' the afternoon and put off startin' the expedition till dark. The police was to go quietly to the village, slip in under cover of night and as soon as it was light they was to grab Sittin' Bull and take him over to the fort. Forty police against a hostile camp wasn't a good gamble, so a detachment of the Eighth Cavalry, a battery of artillery, ambulances, and three of us scouts was to work with the police, only we was to start an hour later and rende'vous at Oak Creek, within fair ridin' distance of the village.

"Orders were that if everything went well with Bull Head and his men we might not be needed and could return. If the game went the other way the police were to send a courier, which would bring our outfit into action. We figured that there was enough police to hold the hostiles until we could get up, and we figured jest about right.

"There under the stars that night we stood around, kind of solemn like, and watched the police ride out from the garrison, many of 'em to come back with their toes up, some of 'em to bleach their bones in shallow graves, and my old heart goes out to 'em now. No monuments, no pensions, no long notices in the paper for them that took the trail, but, by George, they was as faithful as any soldier that ever wore the army blue.

"They was a good-lookin', hard-ridin' little bunch in their blue coats and black sombreros. We yelled 'good luck' and wished 'em success, knowin' darned well it wouldn't be long before we all would be ridin' through the same gates on the same errand. Injuns don't make much of those sort of things, and aside from a wave of a hand or a nod they disappeared out on the black prairie without a sound.

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"After they'd gone we hung around an hour or so, groomin', gettin' quartermaster's stuff, and dolin' out ammunition. We each had a good tin of coffee and a cracker or two, then the trumpet sounded 'assembly' and 'mount' and we clattered off with artillery, ambulances, and the wagon train rumblin' along in the rear. The other two scouts and me was out in front pickin' the trail. We had a fair night of it and bearin's were easily got, but every oncet in a while we'd have to stop and wait for the wagon train to catch up. Major Fetchet was in command and he kept proddin' us along for fear we'd be late for the party.

"About four or five in the mornin' we halted at the rende'vous, dismounted, had a snack to eat, and let the hosses graze.

"Pretty soon, a little after dawn I should say, we could just hear a low rumble 'way off in the distance—a cross between a drum-roll and a thunderstorm horizon down. It would die out, stop, then begin again, and it didn't take a major-general to guess what it was. We looked at each other as much as to say, 'Bull Head ain't havin' no ice-cream festival.' It was crackers to ca'tridges that his courier would soon show up; so we kept, the while, a sharp watch in the direction of the firin'.

"Sometime after daybreak we see just beyond a patch of timber, a tiny speck bobbin' around. It dove down in the hollers and up again, gettin' larger and larger until a policeman, gallopin' like mad, dashed into camp without any hat or coat, his hoss all sweaty, with nostrils workin' like a bellows. The runner was a half-breed and he hardly drew rein afore yellin' that the hostiles was shootin' up the police and for us to hurry.

"In two shakes we was mounted and on our way, the firin' growin' louder and more distinct. In an hour we got so's we could see a blue circle, like a saucer, where the hills met the sky. The trail was gettin' warm and we tightened up ready for trouble and expectin' to get it good.

"What happened at the camp afore we got there was a-plenty. It seems that as soon as it got light enough to see the police, with Bull Head in front, sneaked up to the village. There wasn't any watch. A dog or two yelped, but Injun pups do that all the time, so none of the hostiles paid any attention to it.

"Pretty soon Bull Head located Sittin' Bull's cabin, and luckily the door was unfastened. The policeman shoved it open a bit and stepped inside. Mocassined feet don't make any noise. There on the floor lay the medicine man, his squaw and children, all of 'em sound asleep.

"The policeman jabbed his toe into Sittin' Bull's ribs and told him what he'd come for. The family woke up on the jump. Sittin' Bull rubbed his eyes and sat up, while the policeman showed his warrant and placed the old feller under arrest. You can believe there was a good-sized argument right then and there. Sittin' Bull got het up, dribbled and chattered, but Bull Head told him it wasn't any use makin' a fuss, because he'd have to go anyway, and what was more, the hull Eighth Cavalry was within hailin' distance for that one purpose.

"The squaw begged old Bull to give in. She told him he'd better surrender. She knew there was no use dodgin', especially as she'd got sight of two 'forty-fours' hangin' kind of handy in the policeman's holsters, and, take it from me, a woman's guess in a case like that is pretty nigh right—no matter whether she's red or white.

"Well, sir, the old man growled and cussed, then he had a whispered confab with his squaw. He said he'd go. Now, right here is where the craftiness of the redskin comes into play. Bull said he'd surrender without any trouble and started to get his hat—he didn't dress, for it's Injun fashion to sleep in full rig. After throwin' a buffalo robe over his shoulders the chief said a few words to his little boy, stood stock still, and looked the policeman in the eye.

"Perhaps Bull Head was thinkin' of the time the old man done him in the hoss trade, or maybe he was anxious to get started; anyway, he give the medicine man a shove and told him to *'hupo watchee'* which, in plain English, means 'get a move on.' The Sioux leader flew

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into a rage and commenced arguin'. Bull Head grabbed his arm and pulled him toward the door. Sittin' Bull swung round and said, 'I'll take my time or die right here.' Then they had a scuffle, which was just what the medicine man had been waitin' for. He kept edgin' toward the door and when he got near the threshold he give one full-grown war-whoop, what they call the 'alarm halloo,' loud enough to wake the dead.

"Inside of a minute the flap of every tepee belched warriors. They smelt trouble and, lookin' around, saw the police crowdin' close to Bull's cabin. It didn't take long to figure out what had happened. In a second the hull gang started to rescue the old man.

"One of the hostiles named Catch-the-Bear fired at Bull Head first crack out of the box, and hit him in the leg. The policeman let one of his guns loose, but the wound crippled him badly and he fell to the ground. As he went down he told Sittin' Bull, in words that wouldn't look just right in print, that he'd been waitin' some little time for the chance, and he shoved the nose of a revolver right into the medicine man's gizzard and pulled the trigger.

"Sittin' Bull crumpled up. Then hell let loose. Hostiles and police fought all over the place, dodgin' back and for'-ard, behind the cabin and into the tepees and out ag'in, yellin' and howlin' as only an Injun can when he scents blood. Some of 'em got hit two or three times before goin' down, and, by George, the police held that village from the time the fight began, when the courier started, until our men got up about two hours later. It's always been considered a very han'some little fight, and I'm here to tell you that it was all that's been claimed for it.

"When we came in sight of the camp a cloud o' smoke and dust hung over it like a pall—you couldn't tell friend from enemy. All you could see was figures dashin' around, flashes of flame, and all you could hear was the whiz of lead and the rattle of rifles.

"The Major unlimbered and let fly at the tepees which was stickin' up out o' the smoke. We all dismounted, actin' as infantry, and deployed in open order. It was all over pretty quick—shrapnel done the trick and inside the hour hostile redskins that could beg or steal a pony was gallopin' off over the prairie and them that couldn't ran foot-races until the feathers that was stickin' out straight behind 'em disappeared in the distance.

"Yes, sir, the fight the police started was hot while it lasted, but it didn't take long to finish. When the fracas quieted we picked our way over any number of bodies—some of 'em wounded and many dead, until we come to Sittin' Bull's cabin. Just outside lay the old man on his back, his knees drawed up like a half-open jack-knife and arms throwed back over his head. He was a good Injun at last.

"Inside the shack was Bull's little son, Crow Foot. He had tried to crawl under a bunk to hide, but a policeman hit him over the head with the butt of a revolver and then shot him—right plum through the body, and the bullet went into the floor plank. The hole was there for many a day after. The little chap hadn't nothin' to do with the fight, and I felt kind of sorry, but it was all accordin' to red law.

"At last we come to Bull Head. He had tumbled over on his side about six feet from Sittin' Bull, and, would you believe it, when we turned him so's we could see his face, he was smilin'—yes, sir, smilin' like he was happy,—though he knew what the big holes in his side and legs meant as well as we did, and if I'm any judge he was sufferin' agony that would have made a white man yelp.

"Within ten feet of the cabin door lay five policemen and about double the number of hostiles. The thick of it was right at that spot, and you could see bullet marks on the side of the cabin as thick as holes in a sponge.

"After the surgeons had done some quick work we gathered what was left of the police and held a council. Aside from the groans of the wounded and the howlin' of half-dead ponies, there wasn't a sound. It didn't seem real and it weren't natural, so the Major decided to pack back to the fort. There was no tellin' but what the hostiles would go round and gather a couple o' thousand

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more and by sundown there would be another Custer Massacre to write down in history. Anyway, we had 'secured the person of Sittin' Bull' as orders said, and after all that's what we went after.

"So we put Bull Head, Sittin' Bull, and all our wounded and many of the Injuns in ambulances and started for the fort. I want to say that the police did fine work—fine work. It was a ticklish job, and if Bull Head had wabbled for a minute the beans would have been spilled. He assayed 22 karat pure. Poor feller, he died doin' his duty and after the fracas at Pine Ridge the Ghost Dances blew up. What would have happened if Sittin' Bull hadn't been captured no one knows, but it's a safe bet that things would have been different if it hadn't been for the silver medal and the settling of a grudge."

* * * * *

The fire had burned quite low when Jasper finished.

"No, sir," said he, standing and stretching his long arms toward the rafters, "there ain't nothin' in a white man's make-up exactly like a redskin vengeance."

PROFESSORS IN PLACE OF "PRO'S"

By MACK WHELAN

Are Members of Our Faculties to Take Over the Task of Coaching Our Undergraduate Teams?

IT was Dean Briggs, of Harvard, who, in describing the greatest need of American universities some months ago, said that the imperative requirement is for more practical idealists holding membership in faculties. This remark was novel in more ways than one. Any representative body of college graduates of the loyal variety who attend alumni dinners with regularity will agree that a symposium of the greatest need of any representative university is money. When the impressive hush spreads over the banquet room, informing all that the time has come for the mouthpiece of alma mater to tell of the most imperative requirement, it is oyster shells to the after-dinner coffee that he is going to ask for a million dollars. It's a poor college president nowadays who cannot point out, with elaborate statistics to prove the point, that unless a seven-figure fund is subscribed within a month, the old plant at Siwash will go under the Carnegie foundation hammer.

Educators who smart under this criticism may object to the observation of Dean Briggs, on the ground that Harvard is one of the few institutions with an income so ample that the intellectual atmosphere is not clouded by the increased cost of educating. The fact is that years ago there were people in and around Boston who considered Dean Briggs an idealist. Since then, largely because of his destructive and constructive engineering abilities, the old Gold Coast is becoming an isolated reef some distance off the Cambridge shore instead of a part of the Harvard mainland. The broader, sounder university spirit which he has helped to create has been attained without sacrificing any essential of the old Harvard College idea. And the general agreement now is that Dean Briggs is a practical man. Nobody will continue to object to your being a visionary if you can make your dreams come true.

One of the reasons why Dean Briggs is so accurately in touch with Harvard undergraduates is that he possesses a healthy enthusiasm for athletics. He is as keen a student of the football campaign at Cambridge as most of the coach-

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ing staff. In the chart of battle of a recent Yale-Harvard football contest, there was an error made by the artist. They say that the slip was called to the attention of the editor of the newspaper which published it by an undergraduate who met Dean Briggs the morning after the game. The Harvard teacher is interested in athletics, not because he thinks it his duty, but because he likes the game.

If there had been a sufficient supply of Dean Briggses to go round among the various universities twenty years ago, it is unlikely that faculties would have had to concern themselves greatly over a matter which in pedagogical parlance is known as the athletic problem. Not so much is heard nowadays of this subject as formerly. Graduates, undergraduates, and faculties throughout the country have reached a general understanding as to certain features which are not desirable. And if a truce instead of untroubled peace prevails in most universities, it is not because there exists a vital difference as to the goal of endeavor, but because there is a lack of agreement on the best means for reaching the desired end.

It is not so long ago that the majority of members of most faculties were agreed that the modern system of college athletics was a menace to the best type of university life; the majority of graduates were agreed that a successful athletic team was a vital necessity to the future of the institution; and the majority of undergraduates were agreed that any faculty member who made it impossible for them to live up to the expectations of graduates by barring a crack player from a team for deficiencies in the work of the curriculum was a relic of the past obstructing progress in the present. There is no university of importance now where such a condition of affairs prevails. The most influential forces comprising all three units of university public opinion have united in a campaign of betterment which has eliminated most of the abuses which made the team system a target of criticism in times past.

Especially notable is the change which has come about in the faculty attitude toward athletics. Instead of looking upon the athletic system as a necessary evil, college faculties, thanks to the forcefulness of men of the type of Dean Briggs, have come to the conclusion that it is as much a part of the life of a university as the curriculum itself. This mental attitude is beginning to effect a change in undergraduate opinion as to the utility of faculty wisdom which is bringing about some surprising results. Dean Briggs has never given a specific definition of his phrase "practical idealist." If you have a rather uncertain idea of the kind of individual who would satisfy, learn of the work which an English professor has been conducting at Princeton.

Coaching Fun for This Professor

That Dr. J. Duncan Spaeth is the right man in the right place is indicated by the fact that he would be the last man in the world to term the task of coaching an eight-oared crew work. It is fun for him. If you will take up your station near the new Princeton University crew-house you will see a tall, broad-shouldered man swing down the hill which leads from the college lecture halls to the shores of Lake Carnegie. He walks with a stride which would seem to indicate that he is just starting a day of outdoor enjoyment. Just at present the state of the weather is apt to confine his rowing instruction to the machines, which means that he cannot send the squad out on the lake. Coach Spaeth is a firm believer in the virtues of fresh air, and it is a safe wager that if the climatic conditions permit the Princeton crews will be on the water.

The Princeton launch is not as trim a looking vessel as the craft which are dedicated to the cruises of the head coach at some of the older rowing colleges. It possesses a good engine, however, and is fast enough to keep within voice-range of the 'varsity eight. Coach Spaeth has a commanding voice. Lake Carnegie is not a large body of water. If you want to become acquainted with his coaching methods you can take your position on either shore and gain an accurate impression of his instructing methods. At the

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start of a season he is patience personified. He gives his rowing pupils every chance to learn the technique of propelling an eight-oared shell through the water. With the university eight, as spring advances, his standard becomes more difficult.

"Some of the men on other college crews talk of the difficulty of satisfying an old-time professional oarsman," said a recent Princeton graduate, who had two years' experience under Dr. Spaeth. "Men like Courtney may express themselves frankly, but if there is any greater ordeal than being criticized by a Professor of English who knows the fine shades of distinction in the usage of every word in the language, I should like to test it."

When Dr. Spaeth first agreed to take charge of Princeton rowing, there were many followers of college athletics who thought that all the coaching capability which he possessed was summed up in vocabulary. There was a general feeling that a promising addition to the list of rowing colleges had been handicapped severely in the competition for honors on the water. That the immediate future of rowing at the College of New Jersey had been sacrificed to selfish faculty edict and that the modern début of the Nassau oarsmen in competitive races would result in disastrous defeat by any professionally coached rival was almost universally admitted.

In the early days of collegiate rowing in this country, when the art of handling the sweeps was not considered so complex a problem as at present, crews from Princeton practiced on the old Raritan canal and managed to make a creditable showing in the old regattas. As the standard of oarsmanship improved, the college found that the meagre natural facilities available at Princeton did not permit the continuance of the sport. A half dozen years ago Mr. Carnegie remedied the defect which nature had left in the Princeton scenic panorama by presenting the institution with an artificial lake. Before the first bucketful of water flowed over the concrete, Princeton athletic enthusiasts had won four or five intercollegiate regattas across the ample and sometimes damp tables of Mr. Renwick's hospitable Inn. It was therefore inevitable that the first spring the lake did expose a watery bosom for undergraduate navigation, all Princeton undergraduates not required for baseball should joyfully enroll as candidates for the crew.

The first practical instruction given at Princeton was imparted by Constance Titus, a former national champion. Titus undoubtedly did a great deal to guide the first progress of the modern chapter of Princeton's rowing history. A number of graduates were anxious to have him appointed as official head coach, with a contract covering a term of years sufficient to enable him to make a good showing against Yale, Harvard, and other ancient rivals, with which universities negotiations for engagements on the water were in progress. Titus never had a chance to send a Princeton eight against a rival. After considerable time had passed, the Princeton faculty took up the rowing situation, and the announcement was made that Princeton rowing would be promoted under the direction of a faculty coach.

The First Tiger Surprise

The first season Professor Spaeth was in charge a triangular race was arranged, with Cornell and Yale as the first intercollegiate rivals to come to Carnegie Lake. The public, which showed marked interest in the event, looked upon it as a good race between the New Haven and Ithacan combinations, with Princeton scheduled to follow the procession at a more or less respectable distance in the rear. That Princeton would prove a formidable contender was considered beyond the bounds of possibility.

The rowing prestige of Yale had not yet been singed by the disastrous reverses which have come to the Blue within the past two years. John Kennedy, a noted professional, was in charge of rowing at Yale, and while he did not enjoy quite as enviable a reputation as Charles E. Courtney of Cornell, it was not seriously questioned, even by most optimistic Princetonians, that the fledgling eight of the College of New Jersey, directed by an English professor, would be decisively defeated.

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The distance set for the competition was one and three-quarter miles, and from the sound of the piston the progress of the three crews afforded a series of surprises. The Tiger combination caught the water like veterans, settled down to an unflurried stroke, and, rowing several strokes per minute less than their two rivals, remained right with the procession when the half-mile mark was reached. As the flag marks were successively passed, rowing critics were surprised to see that the combination which was being left in the rear was not the novice Princeton crew, but the Yale eight. When the final half-mile mark was reached, not the Orange and Black oars, but the tips of the Blue sweeps, were affording the splash of color in the background.

Princeton went into the stretch on even terms, and it took all the strength of the well-schooled Cornell oarsmen to cross the line in the lead. The margin of distance between the first two shells was slight, but the Yale eight finished many lengths in the rear.

The outcome of this engagement surprised the entire college athletic world. When students of rowing form recovered from the shock they came to the conclusion that the coaching of Titus, even though months had intervened since he had the handling of the Princeton crew, was so effective that it survived triumphant in spite of the faculty ukase which had interrupted. Doctor J. Duncan Spaeth received but meager credit for the good showing of Princeton from graduates of colleges who had learned their oarsmanship from professionals.

The Cornell-Princeton-Yale race was rowed in 1911. The fact that most of the men who rowed in that Princeton eight had been placed in 'varsity form by Titus seemed to give ground for skepticism as to the efficiency of the Princeton faculty school of oarsmanship. In the years which have elapsed the continued progress which has been made by Princeton in rowing has proved that the success was not achieved through accident. During that period crews coached by Dr. Spaeth have defeated Harvard, Pennsylvania, and the Naval Academy in addition to inflicting a second disastrous defeat to Yale.

Among typical advocates of professional coaching there still exists doubt as to the ultimate success of Princeton on the water under the present régime. In so far as these critics have allowed themselves to be blinded by the fact that, considered solely from the coaching standpoint, Spaeth is one of the most able instructors of rowing in the United States, they have allowed prejudice to take the place of judgment. If the big Princeton professor spoke with a slight cockney dialect, or if the professional rowing records showed that he had helped rig the shell of Ned Hanlon, the doubters would have been among the first to acclaim him.

Beginning of a New Day?

Doctor Spaeth is the most prominent example of a new development in American university life. There have been in the past a number of instances of college athletic coaches holding faculty positions, but from the manner of their appointment it has been uncertain whether they would have been elevated to faculty dignities if they had not previously been successful as team coaches. Spaeth is one of the most effective English teachers at Princeton. His lectures under the auspices of the Board of Education of New York City are one of the features of the winter course.

When he took up the burden of directing Princeton watermenship at the request of certain progressive thinkers there, the college athletic world had forgotten that he ever had rowed. His experience was gained as an undergraduate at the University of Pennsylvania. Like most men who have been active in athletics during their college course, he retained his general interest after his graduation.

Visiting members of other college crews who have enjoyed Princeton hospitality while becoming accustomed to the course on Lake Carnegie have found him anything but pedantic. It is probably because he takes such a commonsense view of the problem of college athletics that he has been so successful

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in a capacity which initiated a new connection between faculty and student body at Princeton.

"I am glad that Princeton crews have been doing fairly well in the last few years," said Dr. Spaeth to the writer, after the conclusion of a practice session on the lake. "It is not so much a sense of personal satisfaction over any part I may have had in the coaching. The feature which pleases me is that the measure of success which has been attained has not been accompanied by any of the complications which in the past have caused faculties to criticize athletics."

One of the reforms which advocates of economy in college athletics will find exemplified in Princeton rowing is the small expenditure on which the crews are boated. The entire budget of expense for the Tiger crews last year—excluding the cost of building a boathouse—was limited to something under $3,000. This is not exactly a fair comparison with the $20,000 budget of some of the other rowing universities, because Princeton has not competed in one of the big June regattas on the Thames or Hudson, participation in which adds greatly to the unavoidable cost of a crew campaign. The comparison is sufficiently direct to indicate that if each college could find a Spaeth, rowing budgets could be cut in half.

Trinity College is not so much in the glare of publicity as Princeton, which accounts for the fact that the dual efficiency of Professor Raymond G. Gettell has not attracted as large a share of attention as it deserves. Gettell occupies the Chair of Economics at Trinity and has a wide reputation as a writer and lecturer. He is also admitted to be one of the keenest students of football in the country. With the advantage of his coaching, Trinity teams have consistently defeated elevens from institutions with three times the students.

"In my opinion the gradual development of athletics under faculty supervision can eliminate all criticisms which have been brought against the team system," said Professor Gettell in talking over the subject with the writer. "Of course I do not mean to say that faculties should take over athletics by any formal edict. It is more necessary that a faculty coach win a fair proportion of success than for a professional to do so. Given fair material, a disastrous season recorded with a faculty member in charge would not tend to improve the relationship between teacher and student. I feel that the union of instruction in subjects of the curriculum with coaching in athletics is a natural one."

Professor Gettell's theory appears to be borne out by recent developments at Princeton. The freshmen football team, one of the most successful first-year elevens ever developed there, was coached by Willard Penfield, who was one of the most noted players on the Princeton 'varsity eleven in 1912. He was also an honor man throughout his course, and shortly after the close of his period of coaching last fall it was announced that he had won an appointment as Rhodes scholar at Oxford University.

Another appointment recently announced at Princeton was that of Instructor Herring as one of the directors of next season's Princeton 'varsity football campaign. This is another faculty encroachment on athletic direction which can scarcely be resented, for the faculty member in question is none other than the redoubtable "Hef" Herring who, after playing football of All-American caliber at Princeton for four years, went over to England and demonstrated that, played with American enterprise, the highly-praised "safe" variety of English Rugby can become infinitely ruder than anything to be seen on a college gridiron in this country.

In the past faculties have been rather ashamed of athletics. Now they have realized that the athletic system can be made a great means of interlinking the ideas of well-rounded development which are the foundation of every university. If the faculty atmosphere is such that more "Hef" Herrings take up the life-work of teaching, is it not probable that undergraduates will cast aside the attitude of mind which regards teachers as dry sources of antiquated wisdom and give something of the spontaneous enthusiasm which now exhausts itself elsewhere than in the curriculum?

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SPORT WITH THE LECHWE WATER-BUCK

By H. A. BRYDEN

A Record of Days Spent on the Trail of This Handsome and Little Known African Antelope

THE Lechwe or Leche (*Cobus leche*), one of the handsomest game animals in Africa, belongs to that splendid group of antelopes known as water-buck. This group includes among its most important examples the common water-buck, the sing-sing, and Mrs. Gray's water-buck. The first two of these three animals are of large size—the common water-buck stands as much as four feet four inches at the shoulder—and all have thick grizzled coats and the neck maned. The group which may be called lesser water-bucks, known to naturalists as "kobs," includes the white-eared kob, the Uganda kob, Buffon's kob, the puku, and the lechwe.

These antelopes differ from the larger water-bucks in their somewhat inferior stature, their rufous coats, and the fact that they bear no mane upon the neck. It is a fact worth remembering that among the various water-loving antelopes of Africa, including the reed-bucks, the females are invariably hornless. The males, on the other hand, carry fine, often very splendid horns, affording excellent trophies to the hunter; they have a gallant port, and a most handsome appearance. These various water-bucks, it should be stated, are quite peculiar to the African continent.

The lechwe, which derives its English designation from the vernacular name by which it is known to the Makololo and northern Bechuana people about the Zambesi Falls and Lake Ngami, is one of the handsomest and most striking of all this group of water-loving animals. In height it stands some forty or forty-one inches at the withers. The thick coat is of a bright, rufous-yellow hue, paler about the head and neck, and from its capacity for resisting wet the skin of this antelope is greatly in request among natives for use as a cloak or sleeping kaross. The throat, breast, and underparts are white, and the front of the legs bear noticeable dark markings. The body is stoutly built, while the legs are beautifully clean and shapely; the head is handsome and well-rounded, the eyes are large, dark, and melting.

The horns, borne by the rams, are exceedingly handsome. These are very like those of the big water-buck, but are more graceful and symmetrical in shape; they have a wide spread, are strongly annulated almost to the tips, and incline first backward, then, toward the points, forward. The longest lechwe horns yet procured measure 33½ inches over the curve. These came from Lake Bengweolo, in South Central Africa. An average pair of horns will measure from 22 to 24 inches. One striking peculiarity about this antelope—a peculiarity only shared with the rare situtunga or Speke's antelope—lies in the feet, which are extremely elongated, while the space between the hoof and the dew-claws or false hoofs, instead of being covered with hair, as in all other antelopes, is clothed merely with smooth dark skin, absolutely devoid of any hair. The elongated hoofs of the lechwe and situtunga and this bare patch of skin below the false hoofs are, of course, evidences of the extremely aquatic life pursued by both these species.

The situtunga seldom or never emerges from the dense reed swamps in which it loves to seclude itself and stands

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middle-deep in water apparently during almost the whole of its existence. The lechwe, although not quite so confirmed an amphibian, is nearly always found in the close vicinity of marshes, reed swamps, and rivers, where it grazes usually knee-deep—often middle-deep—in water. The elongated hoofs developed by these two species are manifestly well adapted for getting about in marshy ground.

The lechwe is not found in the lower and healthier regions of southern Africa. The dry and elevated plateau-lands—ranging from 3,000 to 4,000 feet in altitude—which stretch from the great Karoo of Cape Colony to northern Bechuanaland, are not by any means suited to its life and habits. Its habitat is to be sought amid the vast and little-known south-central and central lake regions, regions reeking with dangerous malaria and still abandoned, and likely to be abandoned for generations to come, to a few tribes of water-loving natives and to the hippopotamus, the crocodile, the situtunga antelope, and to legions of water-fowl.

Where the Lechwe Are Found

The Lake Ngami country, the Botletli, Tamalakan, Chobi, and Okavango rivers, and their immense systems of streams, lagoons, and marshes; the Zambesi valley, the Lake Bengweolo country, and some other regions of lower Central Africa are, in fact, the true home and abiding place of this interesting and characteristic water-buck. Few travelers and fewer hunters have as yet invaded these regions and very little seems to be known to the outer world of this fine sporting antelope.

The lechwe runs in large troops; indeed, in places where it has been little disturbed by native hunters it may be viewed to this day in the swamps and marshes of the Chobi and upper Okavango, and beyond the Zambesi, in almost countless herds. Unfortunately the natives even of these remote regions are gradually acquiring firearms, and within the next twenty years it is to be feared the lechwe, as well as other kinds of game, will be somewhat reduced from their present abundance. Still their extermination will necessarily be a long and very gradual process. There is not a more beautiful sight in Africa than to witness a herd of these graceful antelopes, standing knee-deep in some vast flooded, grassy plain, their forms mirrored upon the crystal-like surface of the water. Sometimes a great troop of rams, numbering fifty or sixty head, may be observed together, and across miles of flooded ground endless hornless ewes are to be seen.

When these animals are disturbed they gallop in a series of bounding leaps through these vast lagoons, and the sight is still more wonderful. Showers of spray, diamond-tinted by the strong sunlight, are driven violently upon either hand, as the antelopes plough their way madly through the water. Presently they make the shelter of some mighty reed-bed, in which they are pretty certain to find a safe hiding place. Lechwe swim splendidly, and I have seen them take to deep water with great boldness, and progress at a great pace, swimming evenly and rapidly through the stream. But as a rule they are exceedingly chary about trusting themselves to the main rivers, in which crocodiles mostly congregate. They have excellent reasons for this dread of deep water, reasons which I can well illustrate.

We were hunting lechwe one morning on the Botletli River, which is connected with Lake Ngami and runs southeastward through extremely flat, desert veldt toward Khama's country. My hunting friend had wounded a fine ram with good horns, which, surprised as it was on a kind of peninsula, formed by an angle of the river, was not able to make its escape to the lagoons and reed beds farther away. The buck, struck down by the bullet, staggered to its feet and ran some two hundred yards from the hard, sun-baked, alluvial ground on which it had been hit toward the main river, upon the edge of which it stood, looking very sick. Then it fell again. Seeing this, our native hunters ran in to finish the animal off with their assegais. The poor lechwe, in sheer desperation, scrambled to its feet again and plunged into the river, where it

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stood for a few moments up to its neck. The Bakurutse rushed into the water to secure it, when, from under their very noses, a big crocodile swept away the antelope and disappeared with it into the river depths.

On the same day, as at other times, I had the opportunity of watching very closely the admirable swimming capacity of these water-loving antelopes. I had wounded a lechwe, which betook itself from the main river, and as I pressed it crossed a deep lagoon, and made its way on to an island formed by the rising of the floods. The lechwe took to the water with the greatest freedom and swam in beautiful form across the lagoon, thence clambering up the steep bank and becoming lost for the time among bush and palm trees. This animal, although wounded with a Martini-Henry bullet through the middle of the body, for the time being made good its escape; and its head was not brought in till evening by the natives who had taken its spoor.

A Water Habit

When approached by the hunter in fairly open ground, where they have to make use of their excellent running powers to effect their escape, lechwes behave in very odd fashion. They poke their heads low toward the ground, with neck and head held outstretched, and, in the case of the rams, with the horns depressed toward the back. Just at this time they look most uncouth. As you approach more closely, however, the attitude quickly changes, and the antelopes spring away at full speed, bounding frequently high into the air in most gallant fashion.

For a long time I puzzled over this curious bounding gallop. I am now convinced that it is a trick or habit acquired from the natural leaping required and developed by these animals when pursued, in order to progress more rapidly through the water in which they are more often than not grazing. In the water, as they bound along through clouds of spray, the habit looks perfectly natural; on dry land the high, bounding leaps appear strange and unnatural. Yet the sight of lechwe rams, galloping hot-foot across some dry and sun-baked alluvial flat, thus springing occasionally into the air, is a right noble one.

Notwithstanding their swamp-loving habits, the speed displayed by these antelopes on firm ground is most surprising. I have, with my hunting companion, when mounted on fair South African hunting ponies, chased them unwounded over a mile or two of good galloping ground, and yet with but little start the lechwes got much the better of it. Even when running through water nearly up to their middles they progress at a surprising pace. A wounded lechwe, when seized, will sometimes bellow lustily before receiving its quietus, making as much noise as a good-sized calf. Although preferring usually to seek their food among the swamps and marshes in which they love to browse knee-deep, the lechwe will, at certain seasons and in certain places, range upon the dry alluvial flats for some little distance in search of food.

During the dry season of South African winter—that is to say, in July and August—I have seen them grazing upon the flats bordering the Botletli River at certainly a distance of a mile or more from water. Considering the extremely water-loving habits of these animals, this was somewhat remarkable; yet in this locality, where occasional native hunters armed with muskets might stalk them or cut them off, and where they ran certainly considerable risks, these lechwes were to be seen grazing here and there upon dry, hard, solid ground at quite a respectable distance from any stream or lagoon, and especially from those dense reed beds in which they find so ample and so secure a sanctuary. Still it is undeniable that, as an almost invariable rule, in its natural habitats the handsome lechwe prefers to graze *in* and not out of the water, sleeping at night just on the edge of the marshes or lagoons and resting during the day very often in the shallows fringing the broader expanses of water.

Mr. F. C. Selous has well pointed out that while the common water-buck, the puku, and the reed-buck frequent the banks of rivers and the edge of swamps,

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they prefer as a rule to keep their feet dry. The lechwe, on the contrary, elects to spend the greater part of its existence with its feet and legs submerged.

The hunter, if he desires to see these striking antelopes in their native haunts, will have, from whatever part of Africa he may approach them, west, east, or south, a long and difficult journey. But, once arrived in those far-distant solitudes in which the lechwe is found, he will assuredly, if he is a keen sportsman and a true lover of Nature in her wilder and more primitive aspects, find there ample reward for the toil and labor he has undergone. Before him stretches under the hot sun and the hard turquoise-blue sky a vast stretch of flat country, alternating in shallow grass flats two or three feet deep in water, deeper lagoons, huge expanses of dense reed beds, fifteen or sixteen feet in height, and little islands crowned with palms, jutting out from amid the great waterscape that lies spread before the eye. Through the middle of this scene flows sluggishly the parent channel, whence all this inundation proceeds. In this channel and in some of the deeper lagoons crocodiles may be observed floating log-like upon the surface of the water, basking with manifest enjoyment in the fierce sun-rays that beat down upon them.

Upon some of the larger islands, where sufficient browsing is to be found, a troop of elephants may be resting, while upon the fringes of this great inundation, buffaloes graze upon the springing herbage. A school or two of hippopotami make their homes in the main river, and their huge, ungainly heads and smooth, rounded backs occasionally emerge from the flood. Fishing eagles of striking chestnut and white plumage soar aloft, pelicans, flamingoes, ibises, cranes, saddle-back storks, and many curious wading-birds haunt the shallows. Noisy black-and-white spur-winged plovers flit hither and thither with petulant, ringing voices; big Senegal spur-heeled cuckoos flutter with heavy, labored flight from one reed bed to another. Charming kingfishers, some with brilliant plumage of many colors, some in soberer garb of silvery white and black, pursue their prey, occasionally diving with a splash into the water beneath them. And there, dotting the submerged grass plains, you may easily perceive numbers of lechwe, grazing steadily at the vegetation, chiefly grass and the tops of young reeds, within their reach.

If you are wise you have made friends with some of the local tribesmen, people of excessively dark skins, such as you find almost invariably where great heat and much water are to be found in conjunction; people who make their homes amid these pathless swamps and marshes, building their light huts with bundles of reeds easily put together and as easily removed in time of inundation. These people know from generations of experience which islets are safe and which may be submerged by some extra outpouring of the river systems that bring down these mighty floods. They may be said almost to live in their narrow, dug-out canoes; you may even note the ashes of a fire smouldering at the far end of the crank vessel in which you have trusted yourself and your fortunes. But they are wonderfully dexterous, these river people, and punt you across the shallows or paddle you over the deeps with singular skill and cunning.

Stalking the Game

And now, quitting for the time your dug-out canoe, and leaving it and its boatmen sheltered behind yonder reed bed, you creep, wading thigh-deep in water, through the fringe of reeds which separates you from the nearest lechwe The wind is light, and what breeze there is blows softly in your teeth. Very stealthily you go forward, pushing your way ever so gently through the cover; luckily the reeds are green and do not make that abominable crackling which they will do later on. At length you have gone far enough. Crouching down among the cover, with one knee on the moist ground, and the cool water playing about your middle and filling your pockets—you are probably arrayed for this sport in an old pair of breeches, cut down for the purpose, and with bare legs —you take a survey of the tempting scene in front of you.

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Scattered over this wide piece of marsh are some eighty head of lechwe, the majority of them hornless ewes. But, dotting the surface of the blue water—a reflection from that pale azure dome above—there are at least a score of rams, some mature and well grown, splendid, shapely fellows with grand horns, some youngsters not yet arrived at their fullest pride. A hundred and eighty yards from you is a fine ram, one of the finest in the herd. He carries a good, symmetrical head, the horns are beautifully even and lyrate, and his handsome, rufous-yellow coat gleams in the sunlight; manifestly he is in excellent condition, a good heavy lechwe ram. That is the beast for your money!

There is no great hurry; the herd is unsuspicious and undisturbed. Your rifle goes up, the smokeless cartridge cracks suddenly, yet lightly, upon the morning air, and, thanks be to Diana, the ram is down. He struggles to his feet and is away; no! he is down again! He is yours! Upon the instant the marsh, so peaceful a few seconds since, is a scene of the wildest commotion. The lechwe all bolt, splashing across the shallows, bounding along in magnificent fashion, creating a curious hollow roar of beaten water, and sending sheets of spray flying in all directions. You loose off another cartridge, but this time miss clean. Now you tear across the swamp, splashing mightily as you go, and come up with your victim. There he lies, all but submerged in the clear water, a magnificent ram, carrying horns that measure a good twenty-five inches over the curve.

The native boatmen are quickly poling their craft toward you, the lechwe is picked up out of the water, the moisture squeezed from its coat a trifle, and then, after seeing it safely bestowed, you proceed again.

Such a scene is a pleasant episode, indeed, in the life of the sportsman, amid these water-logged wastes of South Central Africa. On the other hand is to be remembered the hard fact that this country is among the most fever-stricken and dangerous to the life of the white man in all Africa. The best time to hunt is during the winter season, from June to September, when the rains have long since vanished and the country may be said to be at its best and healthiest.

But, even in the dry season of African winter, fever can by no means certainly be avoided; and, after a bad bout of malaria, and with few comforts about him, the white man will find that he has lost much of the old zest for hunting and the joy of life. Probably he will be only too thankful to get his bones safely out of the country. The flesh of the lechwe water-buck is by no means bad eating, better, in fact, than almost any other of the water-loving antelopes. The meat of the larger water-bucks is extremely poor—even distasteful—and few Europeans care to touch it. As with the flesh of all the water-buck group, the fat of the lechwe has a curious tendency to harden on the palate and teeth, even when eaten quite hot. Native servants, however, seem to have no sort of objection to this peculiarity.

How the Natives Do It

Wherever lechwe are abundant in South and South Central Africa the natives periodically organize big hunts and, assembling in their canoes, and armed with assegais, maneuver so as to drive the animals into deep water. Here the unfortunate antelopes are very much at their mercy. Strongly and well as they can swim, they cannot get through the water at the pace of a narrow dug-out canoe, propelled by excited natives whose upper thews and sinews have been extraordinarily developed by a life spent almost constantly upon these waters. They are speared on these occasions in scores. Then follows a characteristic gorge, and for days the black villages among the Masubias, Makobas, and other tribespeople are drunk with flesh and palm wine. The skins are carefully preserved, "brayed," and rendered soft and flexible. After this they are sold, either singly or in rugs or karosses, to the tribespeople, often in far distant parts of the country.

I well remember that, when we first reached the Botletli River, every single member of our outfit became quickly possessed, of one of these coveted skins

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either by purchase, barter, or shooting, and used it as a sleeping mat, when lying at night by the camp-fire. They were Bamangwato "boys," and lechwe were not procurable in their own country. Beyond the Zambesi, in some of the remoter portions of the far interior, where natives are scarce and the animals have been little disturbed, lechwe are still to be found exceedingly tame, allowing the gunner to approach openly to within a hundred and fifty yards or less. Thanks to the wet nature of their habitat, lechwe seldom if ever fall a prey to lions, leopards, or other land carnivora. Crocodiles, however, as I have shown, are their deadly foes and are greatly dreaded by them.

Owing mainly to the remote, malarious, and, for generations to come, probably useless nature of the swampy regions which they inhabit, these most beautiful and characteristic water-buck are likely to resist extermination, even in this age of destruction, for many years to come. From present appearances they are, in fact, likely to be among the last wild denizens left to the once teeming continent of Africa. Long may the lechwe survive to decorate these marshes and lagoons amid which it has flourished for unknown ages.

Cook Stroke at Yale

Even at the risk of seeming to give a disproportionate amount of space to Yale athletics we must refer again to the situation at New Haven. First, there is the matter of the crew. The problem there has been solved, perhaps, by the appointment of "Bronc" Armstrong, '95, as head coach with Guy Nickalls, the old Oxford oar and one-time coach of Leander, and C. F. Giannini, of the New York Athletic Club, as assistants. This is something new in crew coaching. It is probable, however, that the coaching force will not be so tripartite as might appear. Mr. Armstrong was trained in the school of Bob Cook when that was a real school, and he has been far from getting out of touch with college rowing in the nearly twenty years that he has been out of college. Mr. Nickalls, of course, is a product of the English method, which may mean much or little. Mr. Giannini should contribute much in the matter of rigging and something in training methods. But, unless we miss our guess badly, Mr. Armstrong will be a real head coach, something that is much needed at New Haven. Furthermore he has the reputation of being plain and straightforward of speech, a habit that will be refreshing after the rather overstrained attempts that have been made from time to time to avoid hurting the feelings of this or that man or faction. There are times when it is a highly commendable act to hurt a few feelings—and this is probably one of them. At any rate it is gratifying to note a subsidence of the unthinking enthusiasm for an "English stroke" which no one seemed quite to understand.

Hinkey at New Haven

The other development at New Haven is the appointment of Frank Hinkey as head football coach. This is the man whom Gordon Brown called "an embodied flame." Others have referred to him as the "shadowy end." There is no

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doubt about his reputation as a great player, one of the greatest probably that ever wore the blue—or any other color. But to coach, that, Mawrus, is something else yet. Not all great players make great teachers of the game. Mr. Hinkey is reported as being in entire sympathy with the open game. During his career as a player few men showed as great ability as did he in stopping that type of play. This may mean that he favors it now—for his opponents. Our own guess would be that Yale will play football next year that is not different greatly, so far as general ground plan is concerned, from that which was played last year. The reason is that football is a far simpler game at bottom than many of its critics appear to realize, and far more complex in its working out than anyone but a coach or a thinking player can know. The difference between a good play and a bad one in point of formation is often a very slight one—a difference that can be measured in a few feet of space or a second of time. Here is where the great coach has his opportunity, in this final polishing of plays that places his men in the right positions to within a foot of space, and perfects the running off of the plays as though with a split-second watch. Mr. Hinkey knows the value of speed. He knows also that the value of an attack depends not so much on the force with which his men hit their opponents as on when they do it and also on the angle of their own drive. The lines of force are as important and unerring on the gridiron as on the blackboard of the engineering lecture room. We shall watch with interest to see if he has worked out the fundamental problems of this higher mathematics of the game.

Michigan to Meet Harvard

It has been settled that Harvard and Michigan are to meet in football next year. This is interesting not so much as a test of comparative skill as a comparison of method. We have heard much of the "Western game" in recent years. This, like the English stroke in rowing, has been a subject about which much discussion has revolved—mostly fruitless. Debates of this kind afford much room for the expression of opinion, but seldom lead anywhere. Sound football is much the same the country over. If some of the Eastern teams have failed to keep pace with the development of the game—and some of them have so failed—the remedy lies not in the adoption of any "Western game," or any other game as such, but in the application of their own sound experience to present-day problems. In every great university the line of progress is marked fairly clearly. It remains but to follow it with open mind and diligent attention to the character of the available material. We may seem to be doing a good deal of rough prophesying this month, so another little guess won't do us any harm. And here it is. The great lesson of the Harvard-Michigan game will not be that neither section plays materially better football than the other in the essentials, but that on the contrary each plays very much the same. In other words, the team that plays the best game, in degree, not in kind, will win. And this will be a very desirable result.

A New Polo Team

The challenge of the English polo team to be led by Lord Ashby St. Legers has been accepted, and a date fixed early in June of 1914. It is too early to judge of the final make-up and playing ability of the challengers, although at this time, judging from the cabled reports, it seems doubtful if they will measure up to the team of 1913. So far as the American team is concerned it is almost certain that there will be three new men in the field. Mr. Whitney has definitely announced his withdrawal, and it is likely that the two Waterburys will follow suit. This will leave Mr. Milburn as the nucleus of the new team and probable captain. Mr. Stoddard, who took the place of J. M. Waterbury in the second game last June, would seem sure of a place, and Mr. Agassiz, Mr. Stevenson, Mr. Montagne, Mr. von Stade, and Mr. Clarke are among those from whom the other members will probably be chosen. Now that the War Department has taken official cognizance of the existence of polo as THE army game, it is likely that future teams will have an

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army coloring, although it can hardly happen this year. All friends of the galloping game will witness the retirement of the "Big Four" with deep regret. They have earned their rest and it is time that others should take up the burden that they have borne so well, but if it had not been for their great work there would have been no shoulders worthy or able to carry the weight. They have put America on the polo map in the four years that they have been pre-eminent. We know of no sporting achievement at all comparable to theirs.

New Rule in Tennis English tennis players are agitating for a revision of the foot-fault rule, with a view to preventing the combination of hard service and immediate rush into the court that some players have perfected. Under the present rule the server is allowed to raise one foot from the ground and, by inference at least, to step forward into the court without replacing that foot on the ground behind the base-line after striking the ball. This makes possible a service while the player is practically in motion forward which the English critics declare to be an infraction of the intention of the foot-fault rule. The contention seems to be well based. The substitute rule proposed by the English Lawn Tennis Association reads: "The server shall, before commencing to serve, stand with both feet at rest on the ground behind (*i. e.,* farther from the net than) the base-line, and within the limits of the imaginary continuation of the half-court line and side-lines, and from such position shall deliver the service; but the server may raise one foot from the ground before the service is delivered, provided such foot is replaced on the ground behind the base-line before either foot is placed on the court."

Decay of English Boxing Apparently poor old England has to mourn the decadence of another treasured national sport—that of the squared circle. Bombardier Wells has been beaten, and by a Frenchman. Think of that and weep! Gone are the days of Sayers and Heenan, of Cribb and Molyneaux, of Humphries and Mendoza. Gone also are the days when any Englishman could whip three Frenchmen. And the reason? We prefer to quote English authority in reply, no less than the esteemed London *Times:* "It is clear that our boxers must learn infighting if they are to hold their own with the American champions and such Americanized experts as Carpentier. The latter has studied the Americanized style, which is the latest modern development of the art, and realizes the superiority which it confers over merely physical advantages in the shape of height, weight, and reach. Wells preferred to stick to the accepted methods of the British school, and consequently, although a fine boxer, was ignominiously beaten. His case is, in fact, exactly typical of the position of this country in almost all branches of athletics, and until we learn the lesson which is the moral of his defeat we cannot begin to hope to regain our old pre-eminence in fields of sport."

What to Do with the Coach To coach or not to coach. That is the question that is agitating college baseball leaders in the East. The question is as to the advisability or propriety of allowing the professional coach to sit on the bench and direct the game so far as his players are concerned. Yale, Pennsylvania, Brown, Williams, and Dartmouth have expressed, through their captains, their agreement with the suggested relegation of the coach to the bleachers. Princeton, Harvard, and Amherst, while sympathizing with the desire to accentuate the amateur character of college baseball, are doubtful if the proposed change will accomplish much in that direction. Our own opinion is that the presence and work of the professional coach on the players' bench is not nearly so much of an evil as the coaching of the players themselves in some of the games. Something has been done to quiet the chatter from the coaching line, and from practically every position in the field, but there is still a great deal to be accomplished. In a Yale-Princeton game two years ago practically every member of both teams took part in this riot of language, even the fielders addressing sup-

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posed quieting remarks to the pitcher. This was true even in the case of the winning pitcher, who was never at any time in need of such encouragement. Even if he had been, one man could have done as much as eight. If a pitcher needs to be told constantly that the team is behind him, and that all he has to do is to "work hard," it would seem a good time to put in another pitcher or another team. Beside such a performance as this anything that a professional coach might do would be unobtrusive. One argument is that the undergraduates on the team should be allowed to work out their own salvation with the full allowance of fear and trembling that the progress of the game calls for. This will happen in any case. The coach may steady his men, but he can do it only when he has them with him on the bench, and we confess frankly that we cannot see great harm in that. After all, the virtue or harm of the professional coach depends entirely on the man himself. Expert advice is always good. The present rules are adequate to prevent overdoing. The good or harm possible to the coach has been done before the game begins.

Mild-Mannered Tarpon

Apparently there are tarpon and tarpon. In a book by an English traveler, Paul Fountain, "The Great Mountains and Forests of South America," describing the author's experiences in the valley of the Amazon nearly thirty years ago, he has this to say of the tarpon of Obydos: "While waiting at Obydos to have some repairs and alterations made on the boat, I amused myself with fishing, and I caught several tarpon, or king herring, in the river just below the town, one of which weighed nearly three hundredweight. These enormous fish are easily caught with a rod and line, and show no fight; and in the Southern States it is quite a common amusement among ladies to go tarpon-fishing. To look at them one would think that they could take the body of a man into their capacious mouths, yet they are captured with a very small bait. They are said to sometimes weigh as much as five or six hundred pounds. About two hundredweight is a fair average fish. Their flesh is a delicacy, and one of the dainty dishes of American hotel cookery, as is terrapin (a kind of land tortoise), and not to have feasted on tarpon, terrapin, and canvasback duck argues you a poor Johnny indeed, in United States opinion." To paraphrase Huxley's famous remark about the lobster, aside from the fact that the tarpon does fight like the mischief, that two hundred pounds is considerably more than a fair average weight, and that it is not a table delicacy, the above description is eminently correct.

The Plume Hunters

Another statement made by Mr. Fountain which does not make so severe a strain on our credulity has to do with a discovery made about a hundred miles up the Purus, one of the tributaries of the Amazon above Manaos. He had been attracted by a flock of turkey-buzzards (?) on a small island in midstream. Here is what he found on investigation: "An old tin pot with a hole burnt in the bottom of it left no doubt in my mind that the people who had bivouacked here were whites. But my attention was attracted most by a large heap on the ground of what looked like small pieces of raw meat, but which, on examination, proved to be the carcases of birds which had been skinned. The skinning had been performed with a certain amount of skill, the leg and wing bones and the heads being severed and carried away in the skins, proving that the latter were required for the bird-stuffer; and I concluded that a party of these rascals who make a trade of catching birds of the finest plumage for the purpose of decorating ladies' hats had found their way thither. Unlikely as it may seem at first glance, there can be no doubt but that a party of those bird-exterminators had found their way to this obscure spot, and reaped a rich harvest among the beautiful feathered creatures which here swarmed in countless thousands, and were, as yet, so tame that many of them could be knocked down with sticks, or captured wholesale by means of nets." And this was nearly a generation ago up an obscure and then little known river in the valley of the Amazon.

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NEWS OF THE OUTDOOR WORLD

Field and Track

ABEL KIVIAT, of the Irish-American A. A. C., won the national cross-country six-mile championship at Van Cortlandt Park, covering the distance in 33 min. 52 secs.

The two-mile record made by Kolehmainen of 9 min. 22⅕ secs. was bettered by W. Kramer when he covered the distance in 9 min. 21⅕ secs.

Miscellaneous

G. LEGAGNEUX, of France, broke all records for height in an aeroplane when he ascended 20,295 feet. The previous record was 19,300 feet, made by E. Perreyon, of France.

P. J. Meylan, the national champion foilsman, lost the championship of the Amateur Fencers' League of America to V. J. Curti, of the New York A. C. The score was 5 points to 4.

Cambridge defeated Oxford in their annual Rugby football match by 13 points to 2.

America has accepted England's challenge for a series of matches for the Polo Cup. The first game will take place on June 9.

Princeton defeated Haverford to the score of 4 goals to 1 in their recent soccer contest.

A. J. Cordier, of the Brooklyn Heights Casino, defeated E. du Pont Irving, of the Harvard Club, in the final round of the national handicap squash tournament three games to 1, by the score of 15-3, 10-15, 15-12, 15-7.

Perry McGillivray, of the Illinois Athletic Club, established a world's record for the 880-yard indoor swim, making the distance in a 60-foot tank in 11 min. 29⅕ secs. The best previous time was by C. M. Daniels, of the New York Athletic Club, in 1907, when he swam 880 yards in a 75-foot tank in 11 min. 44⅘ secs.

The Ranking Committee of the United States National Lawn Tennis Association announce the following ratings for 1913 in the order named: In Men's Singles, M. E. McLoughlin, R. N. Williams, W. J. Clothier, W. M. Johnston, T. R. Pell, N. W. Niles, W. F. Johnson, G. F. Touchard, G. P. Foster, Jr., F. R. Strachan. In Men's Doubles, M. E. McLoughlin and T. C. Bundy, J. R. Strachan and C. J. Griffin, G. F. Touchard and W. M. Washburn, R. D. Little and T. R. Pell, G. M. Church and D. Mathey, N. W. Miles and A. S. Dabney, R. D. Little and F. C. Inman, W. J. Clothier and G. P. Gardner, Jr., H. T. Byford and R. H. Burdick, J. C. Tyler and P. S. Brain. In Women's Singles, Miss M. Browne, Mrs. B. O. Prince, Miss F. Sutton, Mrs. M. McLean, Mrs. R. Williams, Miss Marie Wagner, Mrs. B. F. Briggs, Miss E. E. Rotch, Miss A. Myers, Miss G. Rees.

Basket-ball and Hockey

THE basket-ball games for the month resulted as follows: Army 23, Rensselaer 15; Columbia Alumni 39, Varsity 14; Navy 32, New York 25; Fordham 22, Army 18; Seton Hall 24, Georgetown 20; Dartmouth 21, New Hampshire 8; Fordham 35, Georgetown 19; Columbia 33, Polytechnic 23; Yale 39, Rensselaer 17; Yale 40, Army 32; Princeton 24, City College of New York 15; St. John's 26, Georgetown 24; New York 36, Georgetown 15; Navy 34, Yale 23.

Princeton defeated St. Paul in their first hockey game of the season, 8 goals to 3.

St. Michael's, of Toronto, defeated Yale in their hockey game, 5 goals to 1.

Harvard hockey team lost to the team of the Boston A. A. 3 goals to 1.

Harvard scored a 5 to 2 victory over the Syracuse Hockey Club.

Ottawa defeated Queens College in their hockey game for the Fellowe's Trophy, 6 goals to 1.

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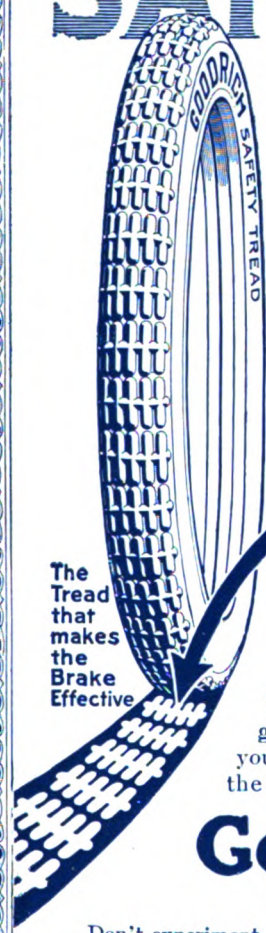
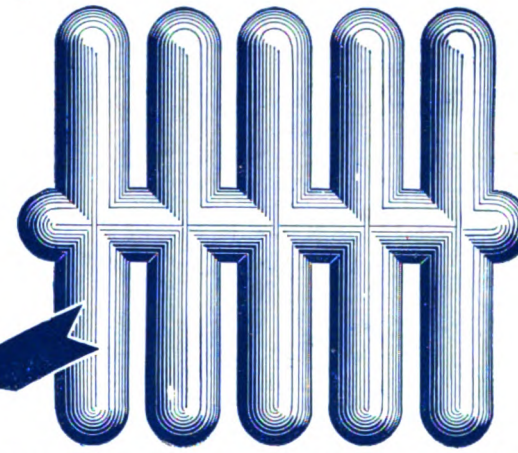
SAFETY FIRST



The Tread that makes the Brake Effective



Five Bars and a Cross Tie—the Safety First Symbol

Five thick, tough Goodrich rubber fingers—

They dig down through mud, slush and ooze; they clean and grip the road. They stop the skid before it starts. They give you lower-cost mileage because of the extra thickness rubber at the point of contact.

Goodrich Safety Tread Tires

Best in the Long Run—Best in the Short Stop

Don't experiment. Don't take chances. Look for the five bars and the cross-tie when you choose a non-skid tire.

Read the reduced prices below. Better still, tear out this price list and hand it to your dealer.

Don't pay more than the prices named here for the accepted *standard* non-skid tires.

Size	Smooth Tread Prices	Safety Tread Prices	Size	Smooth Tread Prices	Safety Tread Prices
30 x 3	$11.70	$12.65	34 x 4½	$33.00	$35.00
30 x 3½	15.75	17.00	35 x 4½	34.00	36.05
32 x 3½	16.75	18.10	36 x 4½	35.00	37.10
33 x 4	23.55	25.25	37 x 5	41.95	44.45
34 x 4	24.35	26.05	38 x 5½	54.00	57.30

Dealers almost everywhere have Goodrich Tires in stock or can get them for you from one of our branches or depots.

Factories: AKRON, OHIO **The B. F. Goodrich Company** Branches in All Principal Cities

There is nothing in Goodrich Advertising that isn't in Goodrich Goods

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Columbia Records

Fit Your Machine Columbia or Victor

65 cents each is the price of a full thousand ten-inch Columbia Double-disc Records—quality, tone, reproduction and durability unexcelled and so guaranteed to you. Other Columbia records all the way up to $7.50. Ask for catalogs.

DANCE!

If you think you have danced to the best dance music that your talking machine can produce, have your dealer play any one of these;—any dealer should be able to supply them, and *every* Columbia dealer certainly has them ready *now*.

TANGOS. If you can keep your feet still when you hear them you are music-proof. A-1463-10 inch, 65c.; A-1466-10 inch, 65c.; A-5526-12 inch, $1.00. **ONE STEPS AND TURKEY TROTS.** Full of the rhythm and spirit of the dance itself. A-1307-10 inch, 65c.; A-5496-12 inch, $1.00; A-1458-10 inch, 65c. **BOSTON AND HESITATION WALTZES.** You will never be too tired when these waltzes are played. A-5494-12 inch, $1.00; A-5525-12 inch, $1.00; A-1460-10 inch, 65c.

The Columbia Grafonola "Favorite" $50
Favorite in name and favorite in fact. Other Columbia Grafonolas from $25 to $500.

Columbia Graphophone Company
New York, Box B312 Woolworth Bldg.
Toronto, 365-367 Sorauren Ave.
Prices in Canada plus duty.

SEND THIS COUPON WITH 25 CENTS (STAMPS WILL DO)

Columbia Graphophone Co.
B312 Woolworth Bldg., New York

25 Cents enclosed

Send me your special sample record with "Good-Night, Little-Girl, Good-Night" on one side and the musical experiment on the other. And give me the name of the nearest Columbia dealer.

I own a.....machine

NAME.....

ADDRESS.....

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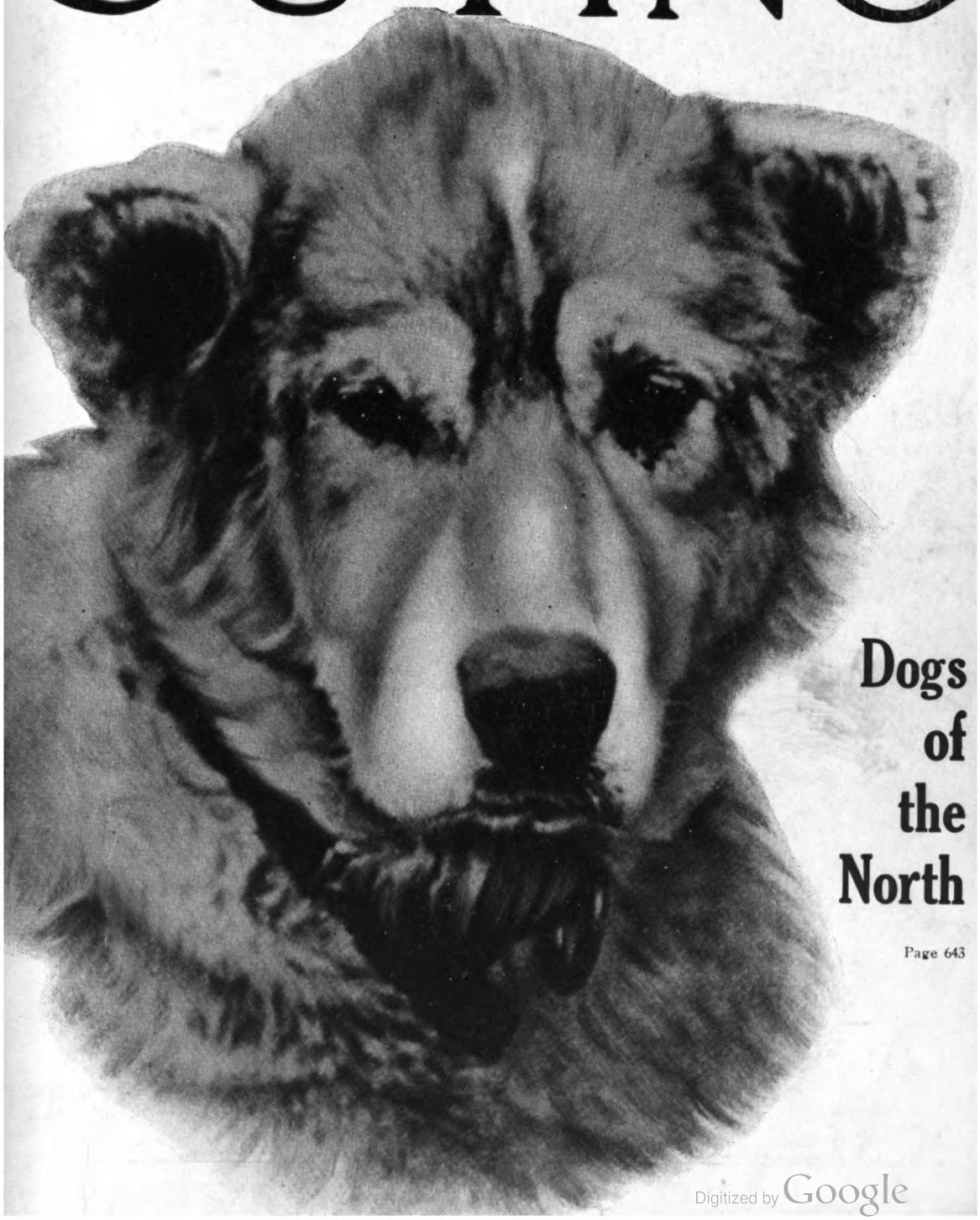

Dogs of the North

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SAFETY FIRST

This shows how

Goodrich Safety Tread Tires

Best in the Long Run

There is nothing in Goodrich Advertising that isn't in Goodrich Goods

lay down the actual proof of their ability to grip the roadway and turn the corners without danger of skidding or side slipping—thus insuring Safety First to all winter motorists.

Safety when you need it—low cost mileage all the time

Don't pay more than these prices for the accepted *standard* non-skid and smooth tread tires:

Size	Smooth Tread Prices	Safety Tread Prices	Grey Inner Tube Prices
30 x 3	$11.70	$12.65	$2.80
30 x 3½	15.75	17.00	3.50
32 x 3½	16.75	18.10	3.70
33 x 4	23.55	25.25	4.75
34 x 4	24.35	26.05	4.90
34 x 4½	33.00	35.00	6.15
35 x 4½	34.00	36.05	6.30
36 x 4½	35.00	37.10	6.45
37 x 5	41.95	44.45	7.70
38 x 5½	54.00	57.30	8.35

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THE CALL

Now is the time of the myriad voices,
Wordless, bodiless, calling low;
Clear as a trumpet to all earth's rovers,
" Shoulder your packs and gather and go! "
—From the Journal of " The Old Tinman."

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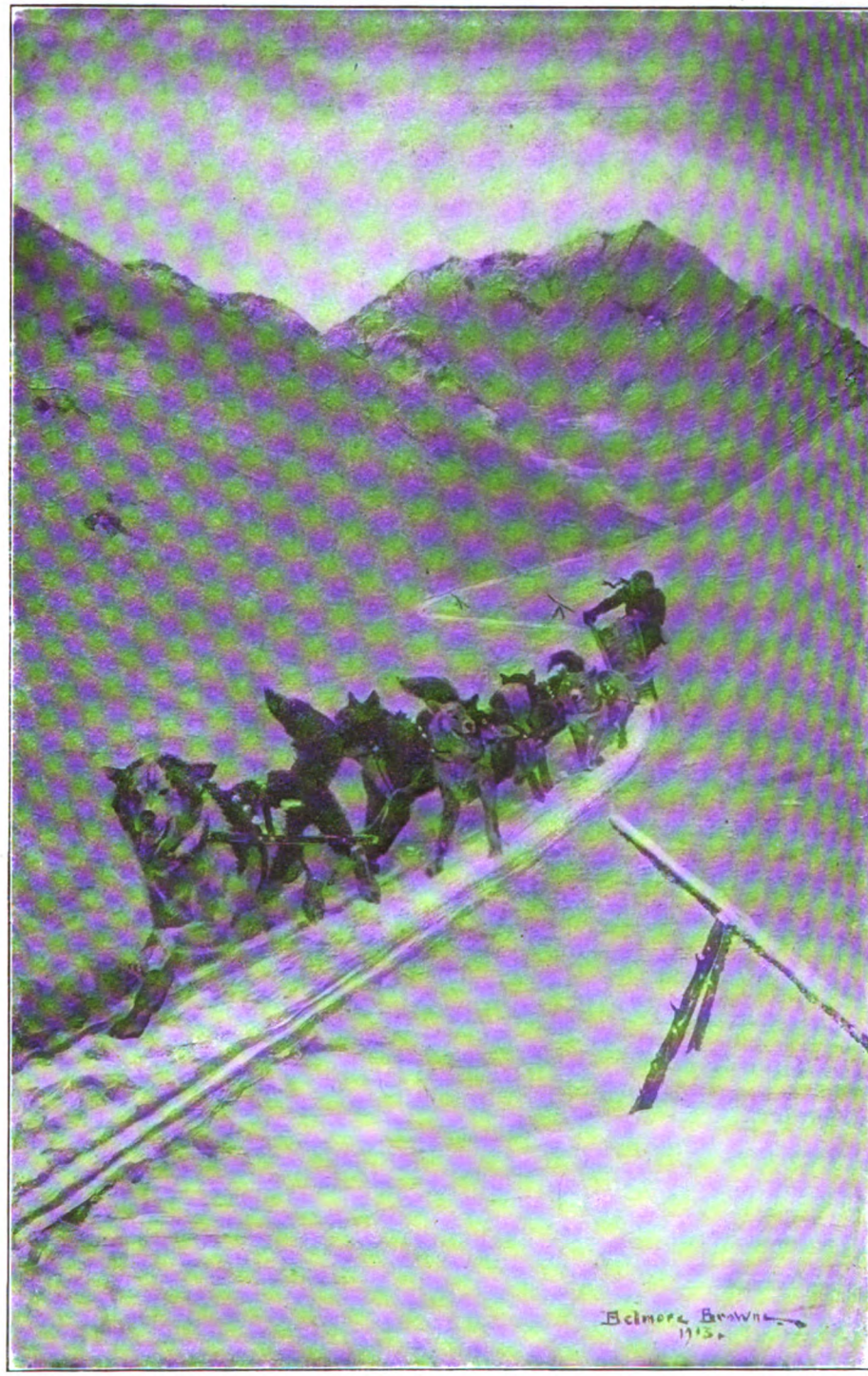

WHEN THE WINTER MAIL GOES OVER CROW CREEK PASS

The Inclined Stakes at the Right are the Government Marks for the Winter Trail

From a Painting by Belmore Browne Illustration for "Dogs of the North"

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SPORT TRAVEL FICTION ADVENTURE

VOL. LXIII No. 6

DOGS OF THE NORTH

By BELMORE BROWNE

ILLUSTRATED WITH PHOTOGRAPHS BY LAVOY AND WITH DRAWINGS BY THE AUTHOR

WITHOUT the dog, Alaska would be an impossible place, especially in winter. With the dog winter becomes the time of travel. Mail, freight of all kinds, human beings, all are transported from end to end of that vast peninsula by the faithful—if belligerent—canine. Hard labor has developed new dog characteristics, new individualities, as it does sometimes with men. His numerous trips in Alaska have given Mr. Browne an excellent opportunity to observe the dog at work and at rest—and in fights. The article which follows tells a part of what he has seen—not all, for that would require a book.

ON a summer evening in the long ago I was paddling across a glassy fiord toward an Alaskan Indian village. The sun had just set, leaving the world steeped in the magic of the northern afterglow; not a sound broke the silence. We let our canoe drift while we searched the shore for a favorable landing-place. Suddenly, from beyond the salmon river that snarled down from the blue mountains that walled the coast, came a long, wailing cry. Before it had died down a second wail arose through the mist far down the beach; the two cries—one rising in a shrill crescendo, the other dying slowly away—were joined by others, until it seemed as if a thousand lost souls were pouring out their burdens of despair and hopelessness.

Long after the weird minor chorus had ceased the mountains threw the echoes back and forth, until you would have thought that phantom wolf packs were acry in every mountain valley. It was the first time that I had heard the breed-cry of the "wolf dog," and as I beached the canoe the cold shivers were running down my back. Since then I have traveled on many a long trail with the northern dog, and if hard labor may be likened to a "dog's life," I have won brotherhood to the clan, and with familiarity a great respect has come for the animals "that make the northern world go round." From one end of the year to the other the dogs are on the move, and while they reach their greatest usefulness when the winter trails are packed hard, they are often called on to carry burdens under the summer sun.

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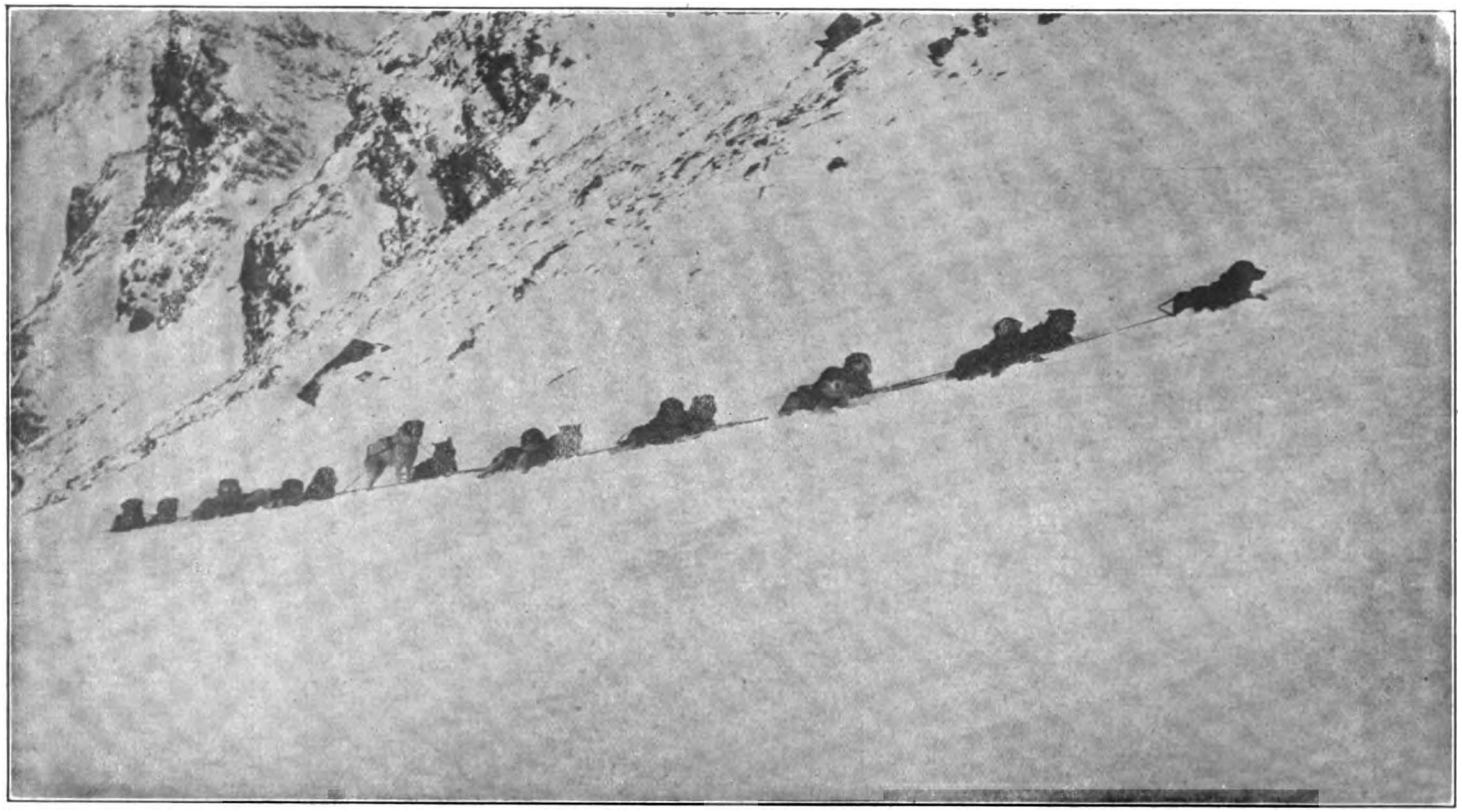

A WELL-TRAINED TEAM, SEVENTEEN DOGS PULLING A HEAVY LOAD OF FREIGHT ON THE SEWARD TRAIL

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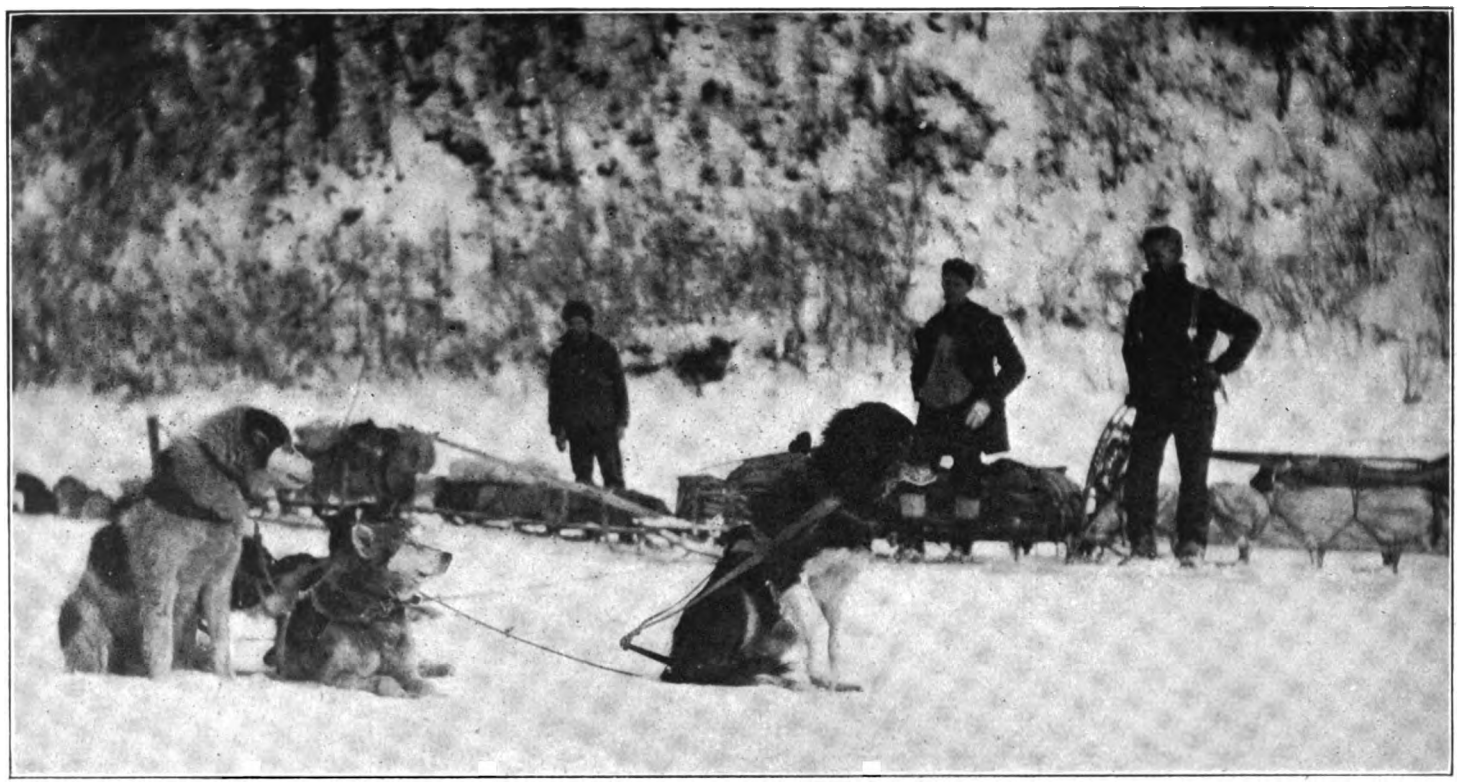

ARRIVAL AT A FREIGHTING DEPOT. THE DOGS REST WHILE THE SLEDS ARE UNLOADED

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A TYPICAL MALEMUTE

Once, in some mountains close to the headwaters of the Yukon, I met a party of Indians on the march. They were crossing a high, snow-crested mountain range on their way to a new hunting-ground. Leading the primitive company stalked the old men; their years of experience had taught them every trick of the trail, and with their knowledge they bought immunity from the labor of carrying burdens. Following them came the young men, their shoulders bent under the weight of heavy packs, a rabble of cruelly loaded dogs at their heels, while the women brought up the rear. As they passed me I had an excellent opportunity to study their method of packing dogs, and as far as I could see their one idea was to make each dog carry as much as he could possibly stagger under. Many of the Indian dogs are deformed for life by being overloaded when they are young.

In 1902 a party of us went into the "Cheeoni" or Wolf Mountains of northern British Columbia. It was summertime; a dense jack-straw carpet of burned timber covered the rugged mountain sides, and without the help of dogs we would nave had a hard time. Dogs were in good demand, for prospectors were scouring the nearby mountain ranges, but we finally secured six strong animals and set to work on our pack-harness. Taking pieces of canvas about 5½ feet long and 1½ feet wide, we turned the ends in and sewed them into pockets, leaving a single strip of canvas about six inches wide to fit the dogs' backs. A short piece of rope completed the simple rig.

A MIXED BLOOD WITH A MASTIFF STRAIN

Equality of weight is the secret of success in dog packing as it is in packing horses, but as a dog is a smaller animal than a horse even greater care in arranging the pack is necessary. We always filled the saddles first, then, putting them on the dogs' backs, we would lash them into

CHARACTERISTIC MALEMUTE POSE
From a drawing

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place with the small piece of rope, and it is at this point that *patience*—the most important factor in the handling of dogs—enters. In fact, dog driving is the last word in *patience,* which, in itself, accounts for the small number of men who become really expert.

The first thing a dog does when you begin to pack him is to lie down! Now,

ALMOST AN IDEAL HEAD
From a drawing.

if you use the toe of your shoe-pack you will "cow" the dog, or make him sullen, and on some future day when you are crossing a dangerous ford or overflow a valuable part of your outfit may depend on this same dog's obedience. You *must* keep calm and study the individual characteristics of each dog. The labor of traveling with a dog-train is added to by the fact that each man is heavily loaded, too. When you are carrying sixty or seventy pounds and have just reached the top of a steep, brushy hill, it is a jolt to your good nature to have to climb down again to liberate some "fool dog" who has "hung himself up" on a dead snag. We went through a thousand such experiences on our way to the Cheeoni

ANOTHER HALF-BREED—GOOD WORKER BUT SLOW

Mountains, and just when everything was running smoothly we ran into porcupine country!

We had left camp at dawn one beautiful morning, and were working our way upward over a rough mountain side toward a high valley that lay in a setting of snow-fields. Everything was going nicely, when suddenly every dog in the line bolted down hill, and in an instant the air was filled with barks, yelps, and man-talk. When the riot had subsided we took an inventory which summed up to one very dead porcupine and six dogs that resembled animated pincushions. We had to camp right there, and for an hour each man sat with a dog's nose in his lap and pulled out quills. Nothing will teach these dogs to let the quill-bearing pests alone, and the more painful their experiences the more eager they seem to impale themselves on the next "porcy" they meet. A good, strong

READY FOR ANYTHING
From a drawing.

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PACK DOG LOADED FOR THE TRAIL

A FINE TYPE OF HUSKY

THE WAY THE PACK IS SET ON THE DOG'S BACK—WELL FORWARD OVER THE FRONT LEGS

pair of tweezers is a useful tool when you are traveling in porcupine country.

This love of the chase, which manifests itself in their feud with the porcupine clan, has its advantages, however, for the dogs prey on every kind of small game. During our stay in the Cheeoni Mountains the dogs practically fed themselves. The mountain sides were alive with marmots, voles, ptarmigans, and other small game, and the dogs found enough to eat without drawing too heavily on our small supply. The Alaskan prospector usually travels light, but he insures the comfort of his dogs by carrying a .22 caliber rifle or pistol, and with this small arm he has no difficulty in supplying not only himself but his dogs with food.

One would naturally suppose that many of these dogs would revert to a wild state, but this does not seem to be the case. The only instance that has ever come under my notice occurred in northern British Columbia. For a number of years a man by the name of Creag "held down" the telegraph station at the Hudson Bay Flats on the Cheslay River. These telegraph stations were situated about fifty miles apart, and it was the duty of the men who guarded them to see that the line was kept clear for a distance of twenty-five miles on each side of their station. It was a lonely life.

In the winter time Creag used two big dogs to pull his sled. Moose were plentiful on the frozen flats of the Cheslay, and when the snow conditions were favorable, Creag had no difficulty in killing enough meat for himself and his dogs. When the summer came, however, everything would change. The dogs were no longer useful, and they would pass their idle hours roaming through the wilderness that ran up to the cabin door. As time went on their trips to the Cheslay for salmon, or their rambles along the mountain sides in search of young ptarmigan would grow longer and longer, until, at last, weeks would pass without their returning to Creag's cabin; but as soon as winter began to creep southward and the small game departed for warmer climes, the dogs would return to their master and

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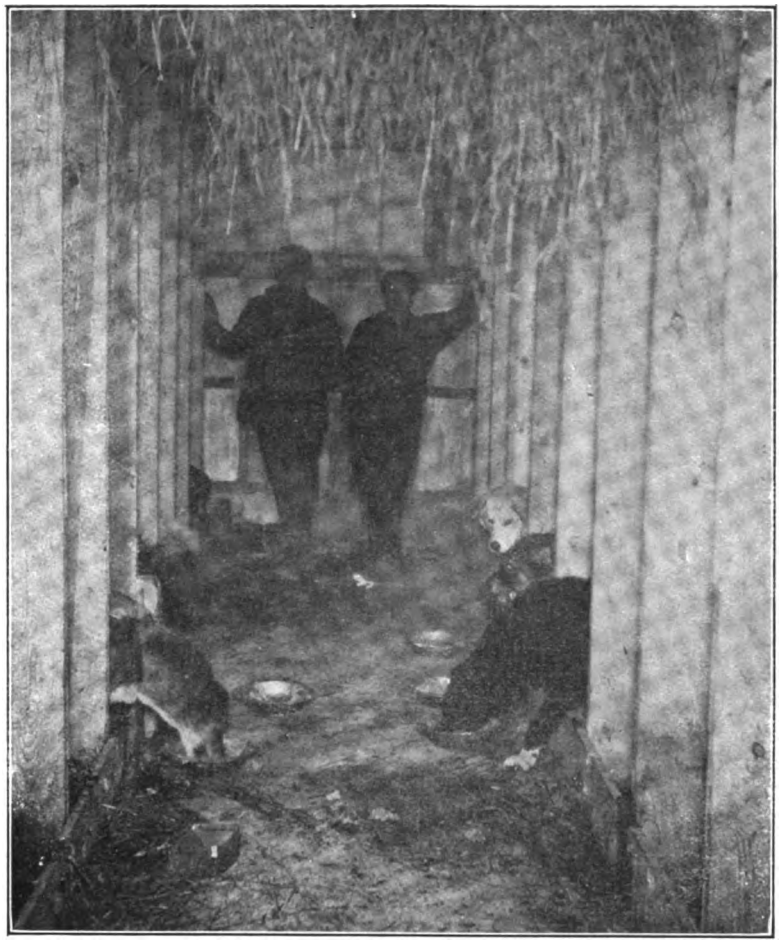

AN ALASKAN "GARAGE." EVERY NORTHERN ROAD-HOUSE IS EQUIPPED WITH A COMFORTABLE KENNEL FOR THE DOGS

settle down to the long winter's work until their summer holiday came again.

Although it is natural for these dogs to chase every kind of living game, I have never seen a northern dog trained to hunt, as our hounds or bird-dogs are trained in civilization. They are powerful, wolf-like beasts, anxious to pursue and attack any living creature, but their instinct is to kill for themselves—not for man's benefit. By this I do not mean to suggest that the northern dog could not be taught to hunt. In the wilderness man kills his meat at long range with the high-power rifle. The dog is, therefore, of no value in the hunting field; his value lies in his ability to labor.

I know of only one exception to this rule. Among the Thaltan Indians of northern British Columbia you will sometimes see a small dog that is not used for work of any kind. It is a beautiful little animal, with a straight, shiny coat of black and white hair, and a sharp nose and pointed ears that give it a fox-like appearance. These little dogs are about the size of a fox terrier, and make very attractive pets, and so far as I know they are the only Indian breed of dog in North America exempt from a life of toil.

When I was on the Stickine River they were not very numerous, and during the past years the breed has been pretty well obliterated by admixture with other breeds brought in by the

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AT EASE BUT INTERESTED

white man; but in all probability a careful combing of the Indian camps would discover a sufficient quantity to insure the perpetuation of the species. We always spoke of them as "Porcupine Dogs," for the Indians stated that the little animals were so active and intelligent that they habitually killed porcupines without being hurt by the quills. Be this as it may, they are remarkably attractive little dogs, and it would be a great loss if the breed was to disappear.

Probably the most difficult part of traveling with a pack train of dogs is the crossing of swift glacier rivers, for the packs must be kept dry, and dogs stand so close to the ground that comparatively shallow water will wet the loads. There is an amusing side to the work, however, for men as well as dogs dread these savage streams, and when the sinister roar of a distant stream strikes your ears the dogs will break out into lugubrious howls that fit your own mood so perfectly that you can't help but swell the doleful chorus with shouts of laughter!

If there is no kind of a natural bridge, you must, perforce, unpack the dogs and carry their loads across. But sometimes a fallen tree may have spanned the current, or it may be possible to carry a dead tree and drop it across the channel, and if such be the case all hands are in for an amusing half hour.

First the men themselves must cross, and the howling of the dogs added to the jibes and laughter of one's companions is not calculated to make the difficult feat easier. If the dogs are skilful log-walkers and the crossing is not too difficult, they too are allowed to "walk the tight-rope" with their packs, and although some dogs become highly proficient, they never fail to show their disgust and dislike of the proceeding. While one dog is crossing the others are so interested that they forget to howl, but the minute he has reached the further shore they begin their sad chant again, and the successful dog gives vent to his joy in triumphant barks. The two distinct choruses, one mournful and the other joyous, are amusing to a degree.

I remember one dog who became remarkably proficient in the art of crossing streams. On one occasion we crossed a very swift chute of water on a slender cotton-wood pole that just cleared the current. It was too difficult a crossing to take liberties with, so

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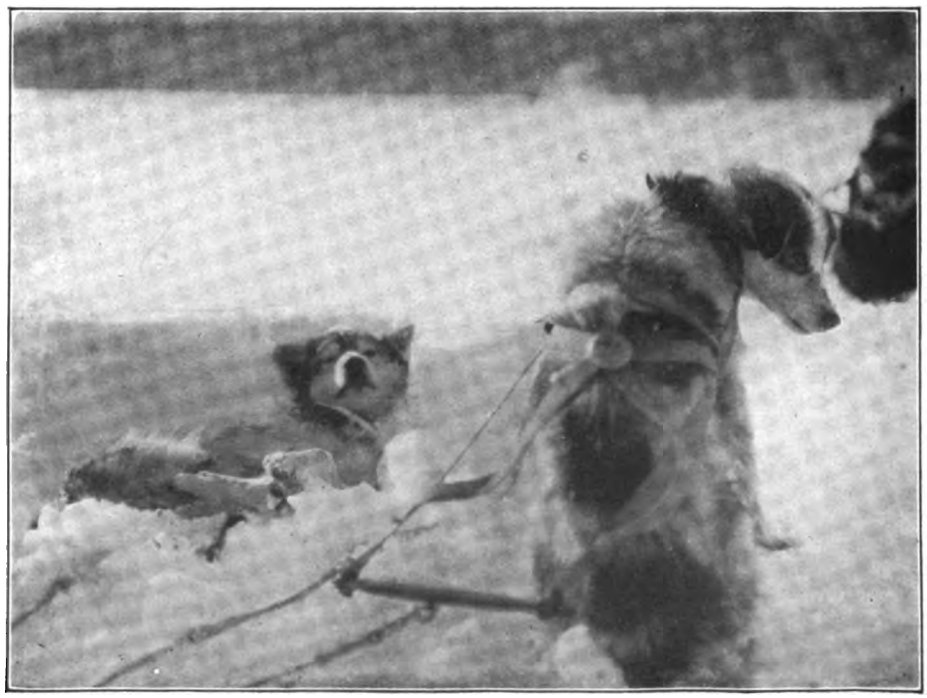
we unpacked the dogs and carried the loads ourselves. When the dogs' turn came they all—with the exception of the skilful dog—fell from the log and were swept down stream, until wet and bedraggled they gained the shore. Our expert husky, however, sprang a surprise. When he began to lose his balance instead of leaping into the stream he kept his fore feet over the log. The rushing water swept his hind quarters straight out behind, but little by little, "paw over paw" he gained the shore.

I have already mentioned the importance of studying the different characteristics of the dogs one handles, but the importance of this is sure to be wasted on anyone who has not driven a dog team. The northern dog far surpasses in strength, independence, waywardness, and self-reliance his civilized cousin, and those of my readers who have trained a civilized pet dog will realize the difficulty of handling—say, seven big huskies. For this reason I have spoken but casually of the use of dogs as pack animals, for it is in the winter time that the northern dog is at his best. Packing is an individual accomplishment, and outside of the life it entails there is nothing particularly interesting in the slow day's march with the heavily loaded dogs. In winter dog driving, however, we come to a method of travel that, for picturesqueness, dash, excitement, and skill, is almost unrivaled.

We no longer think of the individual dog—he is now only one of a team—a cog in a smoothly working machine—and where team-work begins, skill and experience come to the fore. The formation and handling of a good dog team entail exactly the same kind of knowledge and heart-breaking patience that is necessary in the formation and handling of a crack crew or football eleven.

I would like to go into details, and describe the different methods of hitching and harnessing dogs, but the topic is a large one, and I must pass on to the actual handling of the team, for after your sled is loaded and under way your troubles have only commenced.

First "Spot," your off-wheeler, refuses to pull. He keeps his traces cun-



THAT HURT A BIT—ONLY PLAYING POSSUM!

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"HIS FIRST PACK"

ningly taut, but that is all. Speaking to him sharply may or may not correct the fault. If you have driven him a long time you will understand at once whether he is off his feed, or just lazy. Some dogs will die pulling. One of our lead-dogs on the Seward trail was a dog of this kind. Our second team was halted inside a tunnel on the railroad track while we were taking our first team across a narrow piece of glare ice that overhung a precipice. When the second team was alone, the leader turned around, or "jack-knifed," in the tunnel. In an instant the team was fighting, and by the time they were separated the wheel-dog was seriously mauled and our leader was fatally injured. It was a long way to the nearest road-house, where the wounds could be dressed, and under ordinary circumstances neither dog could have reached it unaided. Aten, realizing the fact and knowing the kind of stuff of which the dogs were made, hitched them in their places, and they not only reached the road-house, but *they pulled as well!* The lead dog died of his injuries, but our wheeler lived to give up his life in another battle in the Alaskan Range. It may happen, therefore, that in your first half mile the question of how to discipline your dogs will arise.

The big half-breeds are more amenable to discipline than their Indian brothers, and will stand less harsh treatment. It is even stated by some men that the Indian dog works better under a hard master. While this fact is doubtful, I have, on more than one occasion, had experiences that seemed to verify this belief.

Some years ago a party of us went into the north in search of new big game sub-species. We had a pack train of horses as it was summertime, and as dogs are often bothersome in big-game country we determined not to take a single dog with us. Later one of the best Indian hunters among the Thaltans joined our party. He was most desirous of taking the leader of his winter team with him,

DOG FIGHT NEAR SUMMIT OF THE ALASKAN RANGE

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and as he swore by all the Thaltan gods that his dog would behave we finally gave in.

After many vicissitudes we reached a range that had not been hunted. We were searching for the black sheep, which at that time was practically unknown. To us these animals were worth their weight in gold, for the success of the expedition largely depended on whether or not we would secure a good black sheep collection.

HERE THE SHEPHERD STRAIN SHOWS

During our first day's hunt in the mountains we found fresh sheep sign at the head of a glacier valley. We hunted the ground carefully, our hearts thumping with excitement. At last we gave up in despair, for, although we had found fresh beds and sign in abundance, we could find no sheep.

Suddenly the Indian's dog came running up to us, panting and out of breath —he had stolen away from camp and had hunted the ground himself! There was no trial; we did not even hold a drum-head court-martial. The dog had to be taught once and for all to stay in camp and to stop hunting. Making my pack-strap fast to his collar, I took two half hitches around his muzzle to stifle his howls, while my companion went to a willow thicket and carefully chose several tough whips. There on the sheep grounds we gave the poor animal as severe a beating as I have ever seen administered. He knew it was "coming to him" and that he deserved it, and after the ordeal was over he made a "bee-line" for camp.

On the way homeward we talked about the effect the whipping would have. Heretofore he had devoted all his time to his Indian master, and our opinion was that he would give us even a wider berth than before. What was our surprise, however, when we neared camp, to see the dog running to meet us. Wagging his tail and fawning upon us, he escorted us to the fire, and during our stay in the country he treated us with affection and respect.

In many parts of the north the survival of the fittest is still a living law, and in view of their struggle to exist it is not strange that these dogs have become thieves of the deepest dye. A party of us once occupied a cabin on the outskirts of an Alaskan town. There were countless dogs in the neighborhood and as it was summer they were rustling for

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themselves. Our fighting blood had been aroused by several petty thefts, and we were on the watch for the next luckless dog that fell into our clutches with the brand of guilt on him. I was in the cabin one day, cooking lunch, when a big "husky" sprang through the door. Before I could even reach the door to intercept him, he had crossed the room, yanked a slab of bacon from a nail six feet above the floor, and made his escape! He came and went like a flash of light, and I realized afterwards that he must have planned the theft with the greatest cunning, for he not only knew just where the bacon was, but he waited until my back was turned before making his dash.

HERE YOU SEE THE CHARACTERISTICS OF THE WOLF DOG

On my return from the Mt. McKinley Expedition of 1906, we arrived at Tyonik with the appetites of ravening wolves. Without wasting a minute I ran to the little store and purchased a large ham. Putting it in a five-gallon coal-oil tin, we boiled it over an open fire until it was so tender that it would melt in your mouth. After pouring off the water, I looked about for a perfectly safe place to hang it to cool, for the savory odor had drawn a circle of dogs to our camp. Suddenly my eyes fell on the projecting ridge-pole of our tent; it was at least seven feet from the ground, and our oil-can boiler had a bale-wire handle that allowed me to hang it securely.

Although we could scarcely wait to begin our feast, camp duties took us from the spot, and as we departed we looked with unconcealed merriment on the circle of hungry dogs. But our mirth was ill-timed, for when we returned the dogs and our ham had disappeared. To reach the ham one of the dogs must have run up the roof of the tent, walked out on the ridge-pole until he could reach the oil-can, and then, in some miraculous manner, he had lifted or pushed it from the pole.

While in retrospection one can not but appreciate the humorous side of such experiences, it is difficult to keep your temper at the time, and many a dog has been shot for his crimes in the northern camps. Food is not the only thing that must be guarded, for dogs will eat almost anything that can be masticated; the toughest rawhide or leather yields readily to their sharp teeth, and the higher you hang your snowshoes the farther you will travel.

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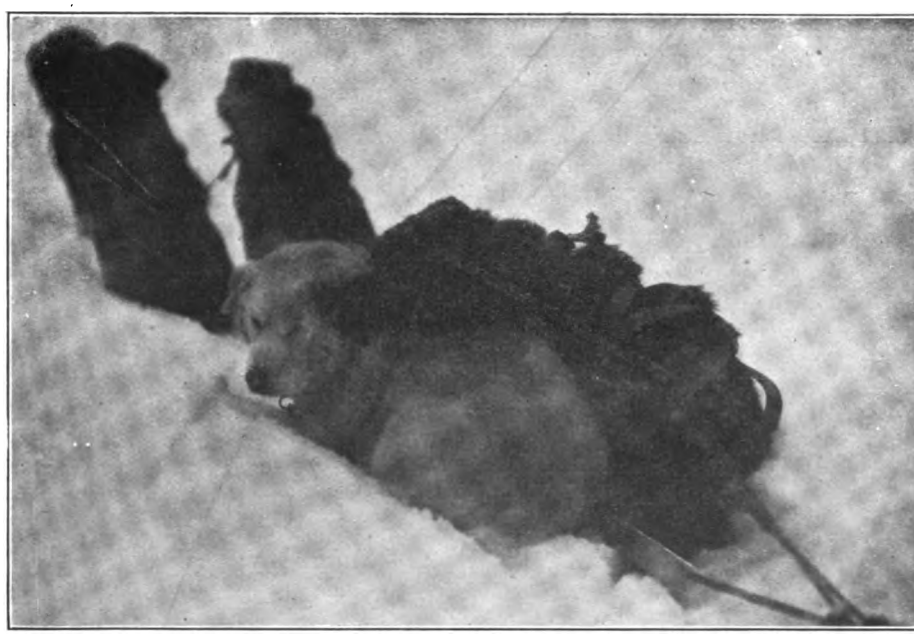
CLIMBING A HIGH GLACIER, SHOWING THE MANNER OF HARNESSING THE DOGS AND HANDLING THE SLED

So much has been written about the northern "wolf dog" that the general public has been led to believe that all the northern dogs resemble wolves. While most of the sled dogs show wolfish characteristics, it is only occasionally that you see a dog that bears a close resemblance to a wolf. A friend of mine owned two huskies whose resemblance to wolves cost them their lives, for a "Cheechako" mistook them for their wild brethren and shot them.

On our way to Mt. McKinley in 1912 we put in five months in the wilderness,



"THE DOCTOR": THE WHITE DOG HAD HIS EAR TORN IN A FIGHT AND FOR WEEKS HIS TEAM MATE TOOK CARE OF THE WOUND

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and as our entire outfit was moved by dogs we had many opportunities to study the peculiarities of each animal. On this trip the fact was impressed on me more strongly than ever before that dogs differ from each other in the same way, and in the same proportion, that men do. "Shep," the leader of LaVoy's team, was sadly lacking in "gray matter," but he possessed a whimsical sense of humor that made you love him against your will. His method of expressing his affection was original in the extreme, and consisted in butting with his head the object of his esteem! In fact, this goat-like peculiarity was so strongly marked that when "Shep" was loose we could not even bend over to tighten a snow-shoe lacing in safety!

"Muckluk," Aten's wheeler, was a Kuskoquim husky, and the most savage and courageous dog I have ever known. The earliest knowledge we have of him is that he came into Seward over the Kuskoquim trail. His driver sold him to a man in Seward, who was unable to do anything with him. After changing masters several times, he came into our hands, and under Aten's careful treatment he became one of our most valuable dogs. His very courage and ferocity made him lovable, and he ended his life fighting.

Aten's leader, "Laddie," on the other hand, never did anything that he ought not to do. He was a model in deportment and intelligent to a degree, but his philosophic turn of mind kept him aloof from the other dogs. The only original thing he ever did was to sit on a red-hot stove, and even in that ordeal he behaved calmly.

"Fat," however, was the clown of our two dog teams. There was scarcely a minute of the day when he wasn't in trouble, and through it all he showed a keen sense of humor and a steadfast optimism that was refreshing. When another dog was going to get a whipping, Fat would begin to yelp with excitement, and at each stroke of the whip he would add his agonized howls to those of the real victim; nor was he behind time when his own turn came, for he would howl just as loudly when Aten, in a spirit of fun, whipped him with a straw, as he did when he received a real beating, and after the ordeal was ended he would entertain us by dashing madly about in the snow, chasing his tail and showing other absurd evidences of his delight.

And so the stories go. In any Alaskan roadhouse after the blue shadows have crept across the snow, and the last team has come jingling in through the still cold, you can listen by the hour to such tales as I have written here; and in the days of my novitiate I remember wondering where the interest lay. Since then I have traveled a long trail and I learned, what every dog driver knows, that the sled dog is a personality—the outdoor man's best friend.

Last fall it fell to the lot of JOHN OSKISON to put in several weeks with the Mohave Apaches of Arizona. If you want to know how the Indian gets his game read WITH APACHE DEER HUNTERS IN ARIZONA beginning in April OUTING.

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THE FRIENDLY GAME OF QUOITS

By FREDERIC BRUSH

THE modern game of quoits, played with the sharp-edged, concave iron rings, is peculiarly adapted to wider use in country and town. It is a friendly game, free from too intense strivings and the ill feeling of doubtful decisions, yet affording attractive test of muscle and nerve. This inherent friendliness cannot well be appreciated by one who has never taken memorable part, or been much in the groups of onlookers. It is told that men who play together at quoits cannot long hold grudges or unsettled disputes. It seems to breed fairness and social equality, comradeship and laughter, and a strain of clean and wholesome thought and talk. Many a neighborhood dates a distinct betterment from the time of its introduction.

A family containing boys and an old man usually starts it in the place. The peculiar clinking sound of the rings in play, or struck as they are for a special gathering call, may be heard on a quiet summer evening for a long distance.

With four playing, and a half dozen looking critically on, the game is at its best. Almost anyone possessing one hand and from nine to ninety years of age may play well at quoits. Girls enjoy it, especially with the lighter weights. It is one of the too few outdoor games in which middle-aged and old men may join on equal footing with the youths and keep alive the play-spirit that holds back decrepitude.

At times the game may take on even the larger group significance. At a county fair, after two days of "pitching," the championship hung between a boy of sixteen and a veteran of sixty. It worked out to be one of the best events of the fair, and surely a character-building test for that youngster from the hills. Hundreds of people tried to see the finish, where, with five points apiece in the "rubber" game, the boy dared too much and the old man, to the accompaniment of cheers for both, won with a well-judged safety throw.

Cast-iron quoits of good weight should be provided, and metal hubs with slight if any heads, kept driven rather low. The pitching distance should be short—from sixteen to twenty feet—and always the same for any group. This gives the player clear view of the minute and changing conditions about the objective point and makes the game one of testing nerve and muscle control rather than strength, as in the old far-casting play. The frequent bending to pick up and the throw of the heavy rings give healthful, moderate exercise.

The best pitching ground is usually the firm, level border of a dirt road, or a well-packed yard free from stones; but one of the main advantages of the game is that it can be played almost anywhere on land, and that every new location, even in the same area, brings different problems. A youth once practising alone on hard ground developed the sliding and jumping trick with the inverted quoit, and, coming out quietly, defeated all his elders, until they insisted on playing half the time on soft turf, while they learned his tricks.

Quite remarkable skill is soon developed, and the game, like golf, "takes hold." It is not uncommon in a contest of experts to see a player by a single throw, on firm ground, displace his opponent's "ringer" and slide his own on in its stead, maybe to have this lifted away at the next throw. Now and then a game of eleven points is won in four tosses, to be long replayed by winter firesides.

In the shortening autumn evenings, with the stress of work abated, lanterns are often brought out and placed at either hub, and the game goes on with unslackened interest, while the children play in and out of the light circles and the women come together and chat, or listen from their homes with contentment to the intermittent clinking and the explosions of cheerful voices and laughter. People driving by pause a while to watch, and all know that the day is ending neighborly and well.

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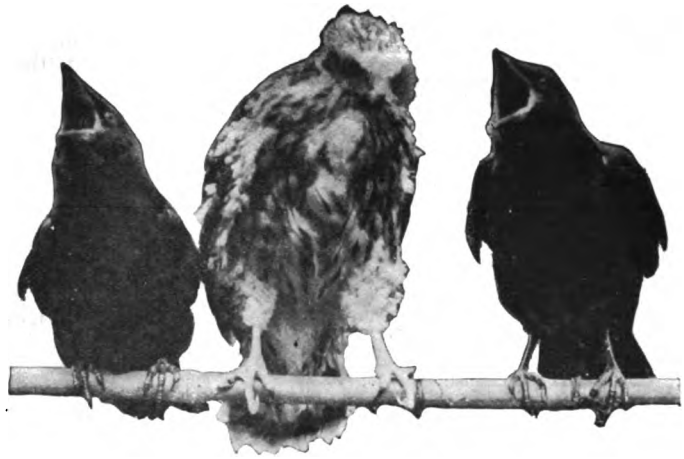

DIGNITY AND DOUBLE IMPUDENCE

AN ANCIENT SPORT IN THE NEW WORLD

By EDWARD BRECK

ILLUSTRATED WITH PHOTOGRAPHS BY THE AUTHOR

What Happened When Her Owner Attempted to Teach Lady Clara Vere de Vere the Noble Art of Falconry

FROM the time when, a small boy, I saw a Cooper's hawk dash down before my very eyes, seize a good-sized chicken in spite of a vicious and heroic attack by the old hen, and soar off with it into space, I have been an admirer of that bold and graceful bird of prey. My romantic soul connected it with the gay falcons of ancient days that the lords and ladies carried hooded on their wrists while cavorting upon gaily caparisoned chargers. Other hawks I was acquainted with, those of the *Buteo* class, the broadwing and the redshouldered, and the dashing osprey, and others, some of them larger than the Cooper, but none was so bold, so delightfully piratical. Later on in life I made in England the discovery that the art of falconry had by no means followed bear-baiting into the realms of tradition, but was still a flourishing pastime, not only in the British Isles, but in many parts of Europe and Asia. To this day the *Field* accords it a special department.

And it was the *Field,* fine old dignified country gentleman that it is, that gave me the idea of trying to train an American hawk on game-birds and hares, for, in an article on the hawks of the world, it stated that, so far as its knowledge extended, nobody had ever made this attempt, though it was probable that several American hawks were quite capable of being put to this use. Knowing the Cooper as I did, my ambition was fired at once, and I vowed to seize the first opportunity that presented itself.

To be the first in the New World to introduce the ancient classic sport—what more interesting and fascinating task could there be? It had its scientific side also. It would help to a knowledge of our birds of prey that I did not possess, for, though the rearing of wild

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pets has been a lifelong pastime, I never ventured to include these dangerous playfellows in my happy family.

It was the middle of last May, as I was sauntering back to my camp from a walk through the still bare Nova Scotia woods, that I heard the shrill scream of a hawk overhead, and, looking up, saw the two parent birds circling so close to a couple of tall hemlocks that there could be no doubt of the existence of a nest there. Returning to the spot next day with a farmer's boy of the neighborhood, I had him swarm up the more likely tree, and, sure enough, about forty feet high, and rather hidden by the surrounding foliage, was the nest with three downy white young Cooper's hawks. He held one of them up for my inspection, and it seemed already large and strong, though entirely unfeathered. He omitted to say, however, that this one was much larger than the other two, an omission that resulted in my having the birds, two of them, taken from the nest much sooner than is thought correct, the books (I had none at the time) recommending that they be left in the nest until well feathered out.

A week later my small assistant put in an appearance at my camp, bringing with him one of the little hawks, much smaller than the one he had shown me from the tree, saying that he had found this one on the ground. Whether this was the actual truth or not, I decided to begin my experiment in hawking at once, and sent the boy back for the biggest nestling. This was on the 29th of May, on which day began the training (save the mark!) of the first New England hawks by an unmitigated duffer.

What funny lumps of awkwardness and gluttony they were, to be sure! There was yellow at the top of their bills, and their legs were yellow, everything else being white. Even at this stage their powerful thighs showed large in comparison with those of ravens, crows or gulls. Their querulous "peep" was much like that of a baby gull, but more prolonged. Hardly had they become members of the wild Camp Buckshaw household when they taught me a

ALMOST FEATHERED OUT

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NOT LONG OUT OF THE EGG

much-needed lesson, but I was already used to being taught by my pets, even the youngest and tiniest of them. While I had a general idea, from my experience with other young things that only raw meat should be fed them, I nevertheless occasionally offered them very underdone beef, in the belief that it was about the same, and that surely the hawks would not recognize the difference. But this was what happened: Pieces of raw meat they would take eagerly, but when I held out a morsel of cooked meat they would apparently not even see it, but peck at the bare fingers that held it. Verily marvelous is the power of hereditary instinct.

The eye of the Cooper, greenish-gray in color, is of piercing brilliance. The pupil is large and, when excited or observant, of unwinking fixedness, presenting a complete contrast with the eye of a crow, constantly shifted up and down. My little crows possessed no dignity, the ravens somewhat more, the gulls a great deal, but the little hawks perhaps most of all.

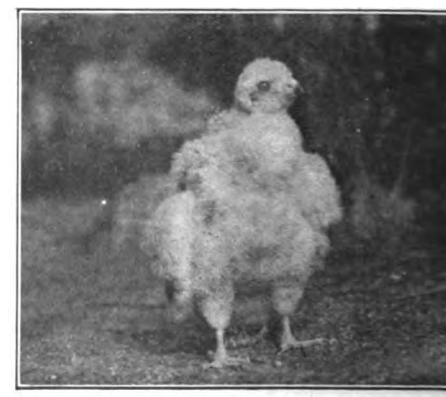
But before the babies had been with me a week a tragedy occurred. The smaller one, no doubt a male, had a little bare spot on the top of the head, the down having been plucked out in some way, possibly by its sister in play. In any case, the big sister began at once to take notice of this bare spot, which should have been a warning to me. But I heeded not, and one morning I found the little hawk collapsed in the bottom of the box, with its poor little head all bloody. The bigger one had taken it, no doubt, for something to eat and pecked it so hard that little brother lived but a few hours longer.

I was angry with the murderess, but how impotent is the rage of a mortal toward that inscrutable sphinx, Nature! I changed the course of my anger, and directed it upon my stupid self, transferred all my interest to the surviving hawk, which, after all, was a female, and therefore the larger and stronger, and solemnly christened her Lady Clara Vere de Vere.

Now, according to the books I have devoured since, Lady Clara should never have survived the shockingly unorthodox training I subjected her to, or, at all events, she should have accumulated so many vicious habits as to render her useless for the purpose of hawking. But I do not think such was the case, and I therefore believe that, properly trained, a Cooper's hawk taken in the North would prove the equal, or nearly so, of the goshawk, though this opinion, in view of inexperience, is offered with timidity.

True it is that Lady waxed apace, developing from a downy nestling into an awkward fledgling, and then into the beautiful creature that the last of her portraits show.

Lady was an eyess, which means a hawklet taken from the nest and trained, as distinct from a more mature bird caught wild and then tamed. When I began this account I vowed to myself to use no term that could not be understood at once by the layman; but what's the use? Falconry has a jargon all its



IN FULL DOWN

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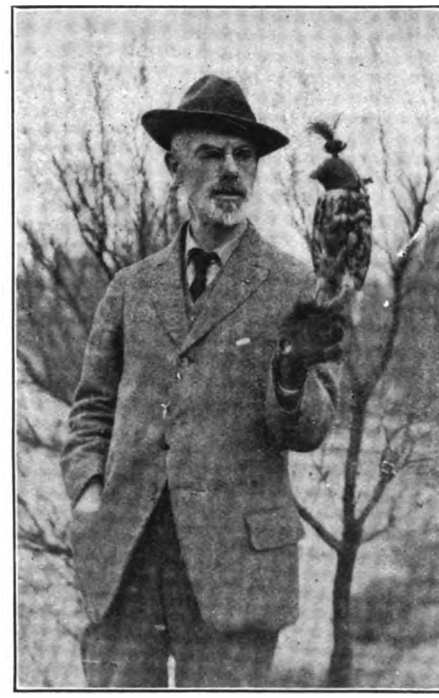
own that has come down to us from across the centuries, and even the modern falconer will serve you up something like this:

"I found my eyess jowking on the cadge, but she awoke, mantled and roused a little, after which I let her bowse. Hooded, with jesses, leash, and bells in perfect order, I took her on the fist and so to the fields. It was evident that she was in yarak, for her sails, mails, and train ruffled eagerly, and her petty singles spasmodically contracted so that her talons gripped the glove hard. A rook appeared and I flew her at it. It was too far off and escaped, but it was a marvel to see Lady wait on, discover another quarry, chase it, throwing up cleverly, and finally bind to it with a lightning stoop. She was depluming it when I was able to make in easily."



ON THE FIST AND HOODED

Which is about as illuminating to an American as a newspaper description of a baseball game is to the average Britisher. And at that the above is incorrect in several details. Only a real falcon, or long-winged hawk, can have talons, a short-wing having vulgar claws, and just wings and tail instead of aristocratic sails and train. By the same token I can never, in this country, be a falconer, strictly speaking, but only an ostringer, unless, indeed, I import a falcon, or succeed in capturing a duck-hawk (peregrine) or a gyrfalcon on this side of the water.

All of which learned pedantry Lady Clara, and I myself at that time, was quite indifferent to. "The Canterbury Pilgrims" and "As You Like It" were far away from the shaggy woods of Nova Scotia. Lady sat upon her perch, where the crows and occasionally Augustus, the droll baby porcupine, joined her, and grew big and strong. She was horribly bored by the other pets, and seemed to feel instinctively that she was being trained for higher purposes. In spite of a regimen that, according to the books, would kill a young peregrine or merlin, she never had an illness that I was aware of. She took a bath every time I placed the big pan near her, and it was amusing to see her chase away the crows, that were as fond of the water, rather more so, in fact, as she. Her training consisted of being given her food while sitting on her master's fist, to which she would hop from her perch.

At about this time I awoke to the completeness of my ignorance and sent out alarm-calls to the *Field* and to that charming gentleman who writes on hawking for that magazine under the name of Tinnunculus. The last was kind enough to send me a long, painstaking letter, crammed full of information, for which I was very grateful indeed; while the *Field* forwarded Harting's excellent manual, and also the (to me) astonishing information that I was not the first man in America to train, or try to train, a Cooper's hawk, for, within a few years a gentleman in Tennessee had brought one to a fair degree of proficiency. Thus my petty vanity of being first in the field was effectually extinguished! A letter to this gentleman, Mr. D. R. Gray, of Rockdale, Tennessee, brought an answer which rivaled that of Tinnunculus in length and

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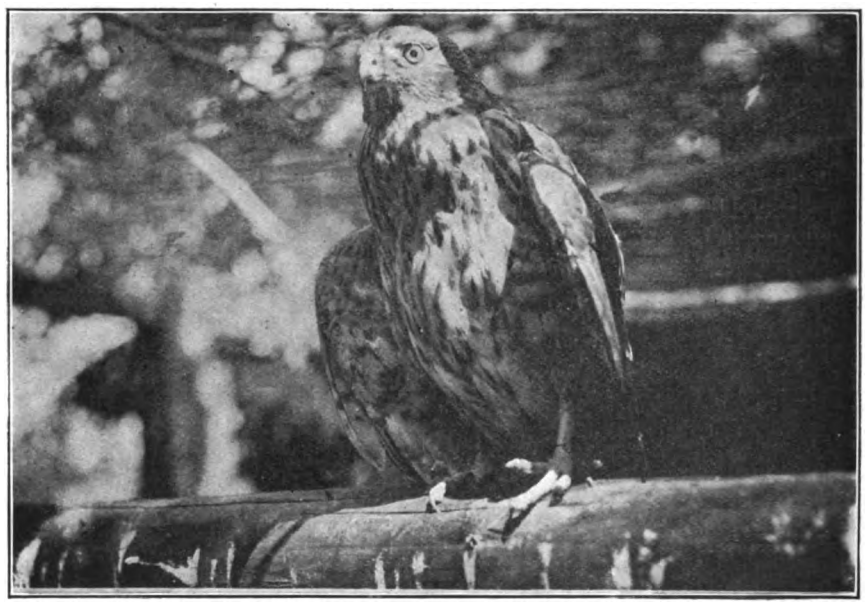
detail, proving that the guild of falconers must be one of kindheartedness.

Soon afterwards I sent to the celebrated falconer, Möllen, in Holland, for proper bells, hood, leash, and swivel, so that, on receipt of the volume from London, I was no longer like the amateur in "Every Man in His Humour," "I have bought me a hawk and a hood, and bells and all, and lack nothing but a book to keep it by."

Though she constantly hopped about, spreading her wings and making the proper movements of flying, she had never, up to the 29th day of June, risen into the air; but I had decided to train her "to hack"; in other words, to "make her to the lure" and then turn her out for a few weeks untethered during the day, in order to exercise her wings and observe and perhaps capture small game. The lure is a combination of feathers and fresh meat, thrown, with a long string attached, to the freed hawk, so that it will seize it and be taken up by the falconer. Without this preliminary training a freed bird, if frightened, is likely to become wild and never come back to her master.



"AN EYE LIKE A HAWK!"

The book humiliated me, as did the letters from the good falconers, for I now perceived the abysmal depth of my ignorance. However, there was Lady, big, strong, and savage, and so I set to work to save the day by duly putting the bells on her legs, and tying on the jesses, which are merely short leashes by which to hold the bird; and by fastening her to her perch with the long swiveled leash in such a way that she could hop up and down. A kind of curtain suspended from the perch prevented the hawk from getting the leash tangled round the perch, confining her to one side at a time. With the help of a friend the gaily-colored hood was also put on, to accustom her to it, and I cast about for the best way to train her on live game.

On the day mentioned a neighbor's dog came bounding down the path past the rock upon which Lady sat sunning herself, with the result that this hawk, that had never before flown, promptly took wing, sailed gracefully and easily to the top of Camp Buckshaw, and there perched upon the ridgepole. As I had observed many a time before, the young bird had learned to fly without any of the "lessons" from the parents that many of our reputed writers seem to think necessary.

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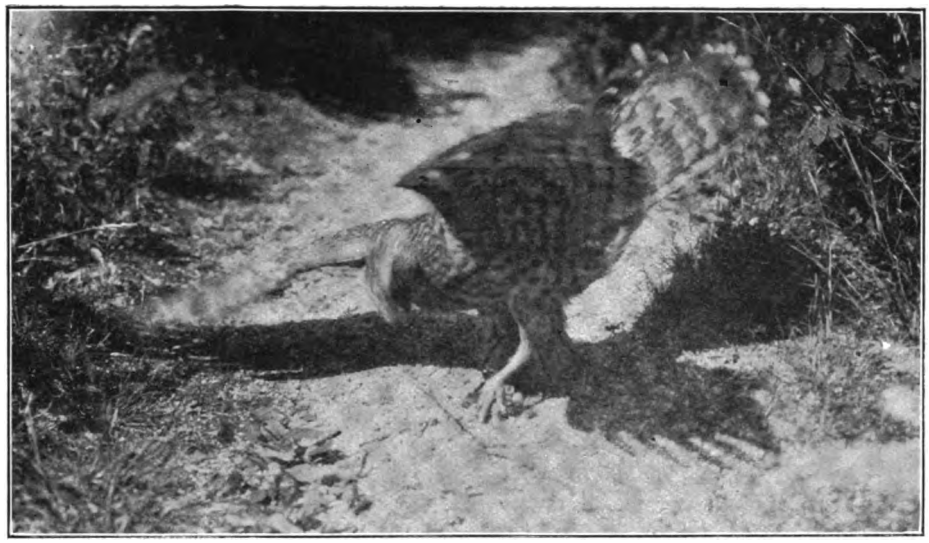

POUNCING ON THE QUARRY

My heart thrilled as I first heard the bells give their melodious sound out of the air, and in fancy I saw Lady mount high into the blue, "wait on" in circles for a while, and then descend like a thunderbolt upon some incautious bunny or blue heron. But this was music of the future with a vengeance, and for the moment I was more concerned in luring the frightened bird back to her perch, to which she eventually returned in her own good time.

Lady watched the impudent chipmunks that ran about the place, and also the chattering red squirrels, with interest, but she did not for a long time make a dash at any of them. The first step toward her hunting development was the retrieving of mice when I threw them to her, or rather upon the ground near by. There was no hesitation. She would drop on them like a flash. The first I threw her were dead, but soon live ones were thrown, and they seldom

TRYING HER SAILS

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got far before there was a brown streak through the air, a pounce, and a needle-sharp claw shot out like lightning. A squeak and all was over!

The bird's quickness was astonishing. On one occasion, wishing to make a snapshot of Lady lighting upon her quarry, I focused the camera on a certain spot and requested my wife, who held a mouse in her hand, to throw it on the spot at a given signal from me. But Lady Clara was watching the scene closely, and, before my wife appreciated the course of events, the hawk made a dash, snatched the mouse from my wife's hand on the wing, and was off down the path with the captured quarry with a scream of triumph, leaving us baffled and somewhat disconcerted.

It must be confessed that Lady gave evidence of being a very emancipated young woman for some time after this, and utterly failed to appreciate the dictates of the Mrs. Grundy of falconry, or her official representatives, the Dukes of St. Albans, descendants of fascinating Nell Gwyn, who to this day are hereditary grand falconers of England. Rather did the sonsy Lady Clara fly off by herself and stay out whole nights together, during which time she very evidently looked out for her own provender, for she often refused, when she returned from the scandalous expeditions, to pay attention to the most succulent lure.

Her dislike of the other Camp Buckshaw pets grew in intensity, and it must be admitted that it was justified, for, quite apart from the fact of the difference in social station, both the porcupine and the sly crows annoyed her sadly the moment that she dared to alight on the ground. The former was too familiar by half, and would simply walk over her, especially when she was feeding, and, since he was a chunky little beggar, all the bracing and covering she could command with her wings could not avail against his weight, the result being that she would fly off with her food in a literally screaming rage.

As for the crows, their method of attack was far more insidious and successful. Several threatening rushes by Lady had given me to believe that, one of these fine days, she would make a meal of Othello or Iago. But the crows were not greatly afraid of the bigger bird's formidable talons and beak, and Iago especially stood up to her on several occasions so cockily that we were forced to cry out "Bravo, crow!" But they never were bold enough to attack her face to face. Their method was to approach softly when she was feeding with her wings and tail spread out stiffly to protect her food, and then to reach in from behind surreptitiously, and, before the astonished hawk was aware just what was happening, to seize the food, withdraw quickly, and rush off with it to a safe place, leaving their victim quite nonplussed.

LADY FEEDING ON SQUIRREL

The very fact of Lady feeding on the ground is enough to make Tinnunculus shudder, for such a thing should not take place, except for a few morsels eaten immediately after a kill, as a kind of reward. Otherwise the feeding is done on the fist, or the cadge, or simple perch, or on the block, used sometimes in place of the perch, especially in the open. The cadge is a round or four-cornered perch made to accommodate several

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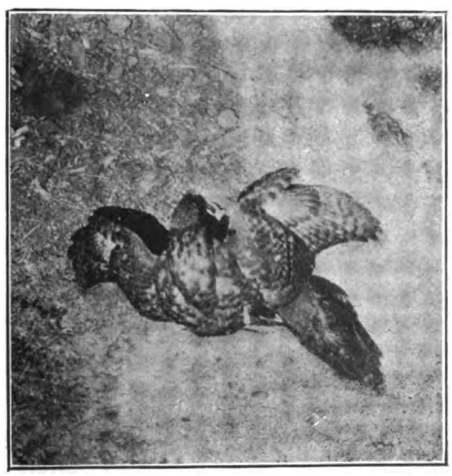
hawks, often carried with straps by a man.

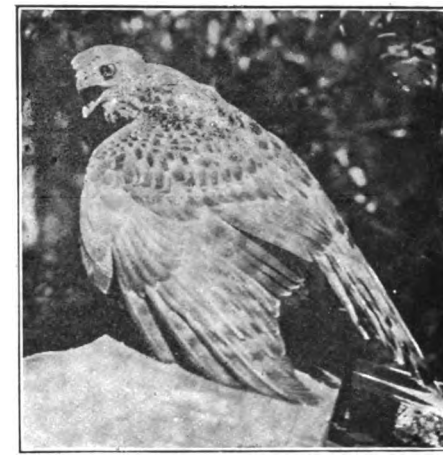
It may be explained that the bells are used in order to find a hawk that has strayed or killed. The purpose of the hood is principally to prevent the hawk from being frightened. The bird is taken out, hooded, on the left fist, and when a suitable quarry appears the hood is taken off and the bird thrown up into the air. As this process has been followed in feeding, *i. e.,* the unhooding it naturally looks about eagerly for food, especially as a hawk is never flown except when hungry.

In the case of Lady Clara I was ignorant of the animals and birds she would be likely to attack. I knew in general, of course, the kind of game the Cooper's hawk takes, such as mice, squirrels, small birds, and chickens, if procurable, but whether a hawk could be trained to hunt all these, and especially hares and game-birds in season, I knew not. And I am still in ignorance of this, for my hunting with Lady Clara was of short duration. I knew that she was hardly old enough (the first half of September) to take afield, but moose-hunting was near, and I made up my mind to see what she was good for.

With as much solemnity as might be I hooded her ladyship, attached the leash, took her on my gloved hand, and started out into a clearing near Buckshaw. She had not been fed at all that day and it



IAGO COMING FROM BEHIND
(Taken from above)



PROTECTING HER FOOD

was late afternoon. Barring the fact that our retinue was more than modest, all the formalities were observed until we arrived at the spot where we were likely to see game, especially field-mice and small birds. Here I sat down to wait with Lady ready on my hand.

It was not long before a bluejay flew down and perched directly before us on the top of a rock ten feet distant. Though a shy bird in Nova Scotia, it showed little sign of fear, but watched the hawk curiously, while I drew the braces and took off the hood. I would, of course, have preferred to fly the hawk at a bird on the wing, or a rabbit (hare), but I had some notion of the limitations of a short-winged hawk compared with a peregrine or a merlin, and I was satisfied to try this bluejay.

As the hood was lifted the hawk roused up, shook its feathers slightly, and stared at the bluejay, which, at that very moment, took flight straight across the clearing in the open. At the same time I tried to give Lady a toss into the air, but the dratted bird hung tight to my glove, and in a second or two the bluejay was well out of sight! Disgusted, I awkwardly hooded the hawk once more and waited for further developments.

It was not a minute later that a small mouse came out of a hole a couple of yards away. At first I scorned the tiny rodent, for my falconry wagon was "hitched to a star"; but I remembered that all the books agreed that it was

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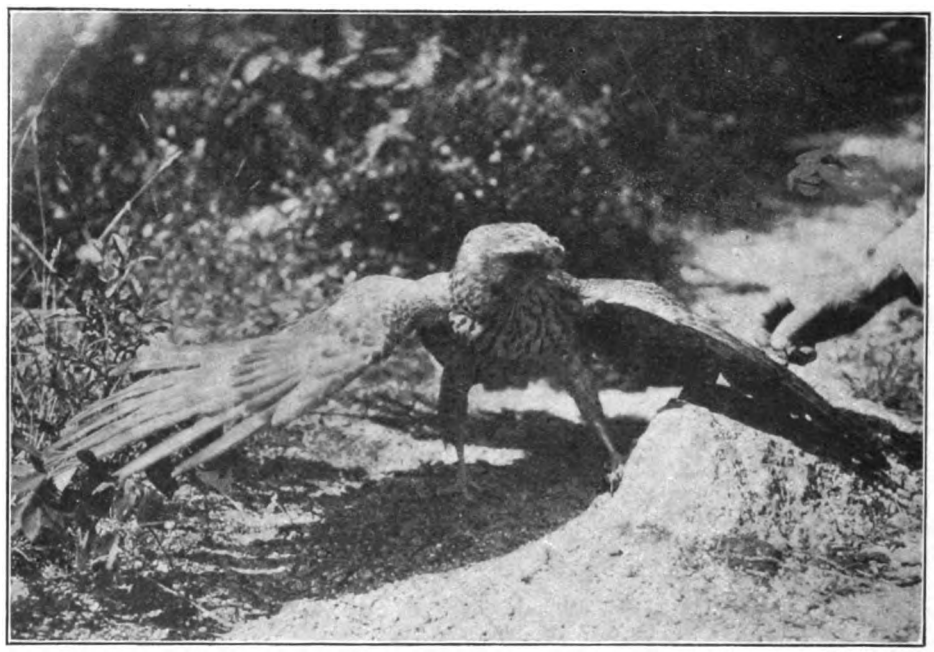
most important that a hawk should kill on her first attempt in the field, and so I carefully unhooded Lady for the second time, and gave her a little toss toward the unsuspecting mouse. This time there was no hesitation. With hardly an effort the bird swooped down upon the mouse, as she had done many times before at home, and the "first Canadian trained hawk" had made her first kill afield!

Obedient to the rules, I let her eat her crop full, which took the whole mouse. It meant only a few mighty pulls, the hawk, as was her custom, grabbing the little animal by the head and barbarously tearing out its tail and entrails. I devoutly prayed that its consciousness had gone out with the first savage squeeze of the claws.

As the kill was accomplished within a few feet of me, my first "making in," or retrieving the hawk, was a perfunctory operation. It is easy to imagine, however, that, if many kills are made in such thickly wooded country as backwoods Nova Scotia, the falconer will have all the exercise in the open air that his heart can desire, and a bit to boot. In fact, the chances of losing the hawk seem numerous enough. It would no doubt depend a good deal on the discretion of the falconer, who should fly his hawk only at game that is within good reach. The bells used should be as large as practicable, so that they can be the better heard in the thick brush.

It is a great temptation to describe a (fictitious!) hunt with Lady Clara Vere de Vere, during which she would give a ruffed grouse twenty yards' start and knock it down as it tried its old trick of swinging smartly behind some tree; or "stoop" upon some bunny going "lickity-split" across the field. In either of these cases I believe the Cooper, be she never so well trained, would fail to get her quarry; for the varying hare is a very powerful and lively animal, and the "feathered thunderbolt of the north woods," in other words the "partridge," is so fast and tricky on the wing that no hawk here or elsewhere can catch it in the air. This is also the opinion of Mr. Gray, who has now had enough experience to be called the only falconer in America.



STAND BY TO REPEL BOARDERS

I wish there were space left to relate

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some of Mr. Gray's Tennessee experiences, but we may hear from him later, as he is still engaged in training American hawks, having a Cooper now on the perch. Mr. Gray says that he did not train his first Cooper, a male, exactly "according to Hoyle," but brought it to a certain degree of proficiency at meadow-larks and sparrows. It is probable that the exact orthodox methods of Europe will have to be modified somewhat on this side of the water, as Mr. Gray has found necessary.

It remains but to say that, during an absence from my camp, Lady was allowed too much freedom, and that I never saw her more. I trust that the bells she wears will give her a certain distinction in hawkdom, and not prove a hindrance in her hunting. And meanwhile I intend to try again.

There are scruples, of course. There is the ethical side to be considered. In a way hawking is a romantic relic of a barbarous though splendid age, and it still retains something of the barbarous element. In Europe, for example, it is considered legitimate to teach a hawk to attack a small bird by attaching a thread to a sparrow's leg and casting it into the air. This, of course, is not only against the law here, but quite impossible for any American sportsman to contemplate. After several years of further experience I hope for more light on the ethical side of this most fascinating old sport.

I shall expect Lady Clara's successor to bring me in small hares and crows and jays and red squirrels, and perhaps a weasel, and, possibly, on some red-letter day, a woodcock or a partridge in the early season, before the birds are very strong on the wing.

HAVE YOU?

By HARRY M. DEAN

HAVE you ever built a camp-fire at the closing of the day?
Have you sat and watched the embers glowing red?
With your scanty supper finished and the things all cleared away,
Have you sat and smoked and thought about your bed?
Of the bed you left behind you in the dwelling place of man,
In the much o'erfurnished room you knew of yore;
Ere you sought the silent places where a fellow learns he can
Do a lot of things he never did before.

Have you ever spread a blanket down beneath the star-strewn skies?
Rolled yourself within its cozy folds to sleep,
At the base of mighty mountains, with their peaks that rise and rise?
Have you known the age-old silence that they keep?
Have you seen the red sun climbing up the eastern slope? Then know
You will ne'er forget those rugged, happy days.
What! You've never known the glory of the new-born day? Then go—
It's a road that's hard to travel—but it pays.

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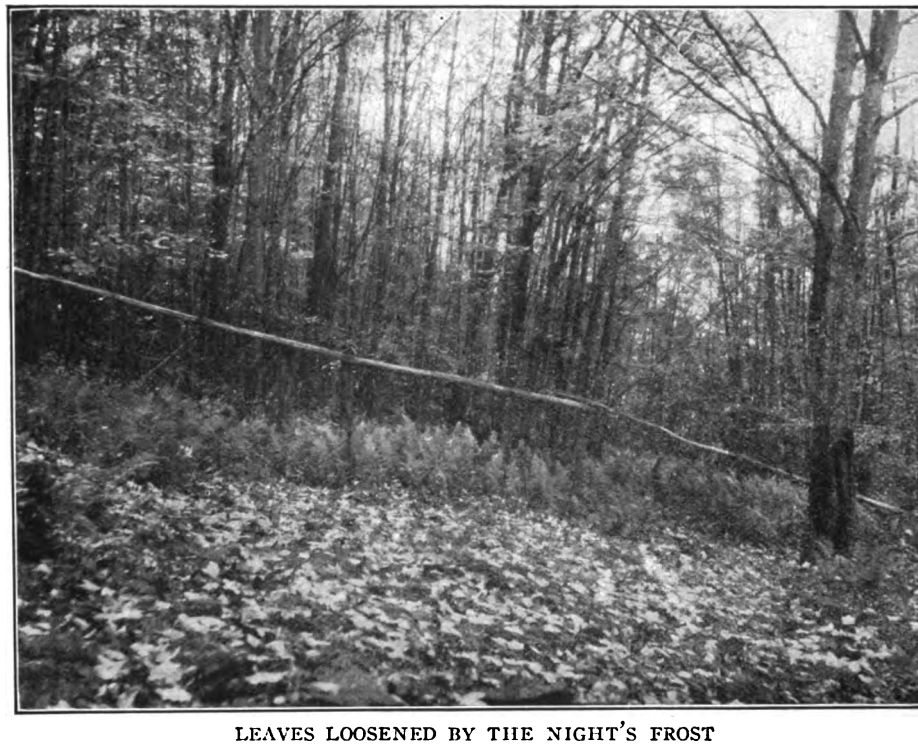

LEAVES LOOSENED BY THE NIGHT'S FROST

FOOLING THE PARTRIDGE

By FRANK FARRINGTON

ILLUSTRATED WITH PHOTOGRAPHS BY THE AUTHOR

Out With Tobe the Man Who Could Beat the Ruffed Grouse at His Own Game

DAVID had been down to our rural free delivery box on the main road and he had returned to our hermitage at the edge of the woods with a bulky bundle of mail which included everything, from the village sporting goods dealer's latest advertisement to a check from an old chum who had just come into enough money to enable him to pay off his outlawed debts.

After handing me the mail, David had gone out into the October sunshine, but a communication which interested me greatly made me call to him. It was a letter from my old friend, Tobe Gryer, to whom David had given the degree of "P.H." (pot-hunter).

Since my first meeting with Tobe, when a sudden storm had driven us both to shelter in the same old hillside barn, I had seen him several times, and I could not help liking him because, in spite of his shiftlessness, he certainly has a pleasant, soft-spoken way that is very ingratiating. And as for knowledge of things woodsy, he would easily pass for the man who invented the woods.

This letter was from Tobe, in reiteration of an invitation which he had often pressed upon me, to come over and go partridge hunting with him. He had told me many times about his ability to

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bring the birds to him by imitating their drumming, and he had by his earnestness almost conquered my skepticism. I had not yet gone, however.

But this looked like a good opportunity. I told David about my bird charmer, and he hooted at the idea of anyone fooling a partridge.

"Why," said he, "these partridges have a regular wireless code by which they warn one another as soon as a hunter steps out of his door with his gun."

I admitted the craftiness of the birds, but I went on to expatiate upon the craftiness of Tobe Gryer.

"You don't know Tobe," said I. "When he goes out along the brook the trout stick their heads out and beg him to let them cuddle up in his basket, and while I never saw him drum for partridges, he has talked me into believing in his ability, and why wouldn't it be worth while to give him a chance to make good?"

"Oh, I'm in favor of that, by all means. If he falls down, he will probably be able to talk us into believing that it was not his fault, that I was a Jinx, or something of that sort. It doesn't look to me like a very good sporting proposition, though, if it's all that he claims for it."

"That does prick my conscience a little," I replied, "but I don't believe that all the partridges we will take advantage of will be enough to put a very heavy burden of guilt upon our shoulders."

So it came about that the next morning while the sun was still scarcely more than peering over the top of the hill and while the leaves loosened by the night's white frost were still sticking to the trees, we set out to take Tobe at his word.

We found him at his back door whittling out figure-four traps for his fall campaign against the festive skunk, and he did not wait for our word to get ready, but reached inside the door where his gun hung on a convenient nail and, shouting to his wife that he'd be back in the afternoon, he led us down the hill to the old mill.

THERE IS SOME GOOD COVER THERE

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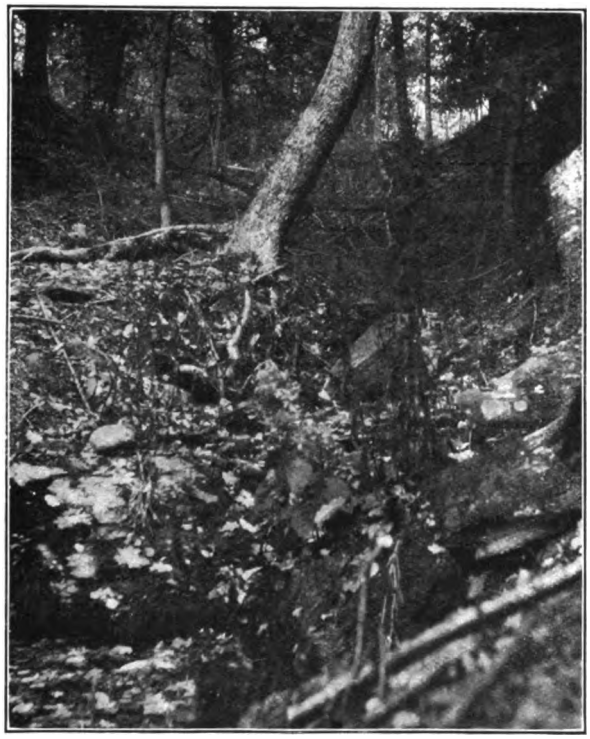

IN THE RAVINE

The mill had long been in disuse, and he entered and from behind a pile of old lumber brought out what looked at first much like a bootblack's kit. It proved to be a small, wooden, rectangular box with a sheepskin stretched, drumheadlike, over the open side or top.

As he brought it out he glanced sharply up toward the house and slipped quickly around the mill and down across the dry bed of the pond, while David and I followed as fast as we could.

On the other side he halted. "You see," he said, "Becky won't have this in the house. She went out with me once and saw how I work it and she 'lows it ain't a fair game, gettin' the pa'tridges to come out and be picked off. But I tell her that any game is a fair game with a pa'tridge. I notice she's always ready to eat the birds when I fetch 'em in. Anyhow we can't all agree about everything anyway, can we?"

Thus appealed to, I had to admit that it was perfectly impossible that we should all think alike.

Tobe said that we would go over behind Sugar Knoll and try our luck first in the ravine where little White Water Brook tumbles down through the rocks. There is some good cover there and a big patch of berry bushes in which the birds were no doubt still feeding.

Arriving at the ravine, Tobe stationed David behind a big rock at the very edge of the woods, with instructions to watch carefully in the direction he faced and to keep perfectly still, and if he saw a bird coming not to shoot until it was near enough so that he could make sure of getting it. Then he placed me in a similar position facing the other way, while he himself concealed all but his head behind a log and faced up the hill between us. Then, when we were ready, he began to drum.

Tump—Tump—Tump—Tump—Tump tump tump-tumptump! Tump — tumptumptump!

He had carefully placed us so that we could not see him drum, though I cannot say whether this was done intentionally or not. There was an interval of probably three minutes, though it seemed ten. Then the drumming was repeated.

David and I strained our eyes to the utmost, and since Tobe had given us no inkling of how many times he must drum or how long before a bird might appear we were every instant in expectancy.

At last it seemed to me that I saw projecting above a little log a crooked stick that had not been there a moment before. I watched it narrowly. It jerked back and forth once.

In a moment it was gone and then a partridge came in sight on my side of the log. It had gone around the end.

The bird was still a long distance away, but that was too much for me. I had never before had the experience of sitting still in the woods and having a partridge walk out in front of me and bid me shoot. I raised my sixteen-

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gauge inch by inch until I was holding it fair on the bird, and as she gave a little strut as if to walk away, I pulled the trigger of the open barrel, though my intentions were to shoot the choked one. I must have had "buck-fever."

There was a bang, and away flew the bird, bumping into a tree as she went. Tobe jumped and so did David, and they followed me to the place where I told them I had seen the bird and finally I managed to vindicate my eyesight by producing two or three feathers.

"What'd you shoot at her 'way off here for?" asked our guide. "I thought I told you to wait."

"Gosh!" I exclaimed, "I couldn't wait."

Tobe eyed the sixteen-gauge with scorn. I had before seen him glance at it with disfavor as he noted its caliber. "That gun may be all right for scaring crows out of your corn patch," he said, "but if you're going to hunt pa'tridges you want a twelve. If you'd 'a' had mine here you'd 'a' got the bird."

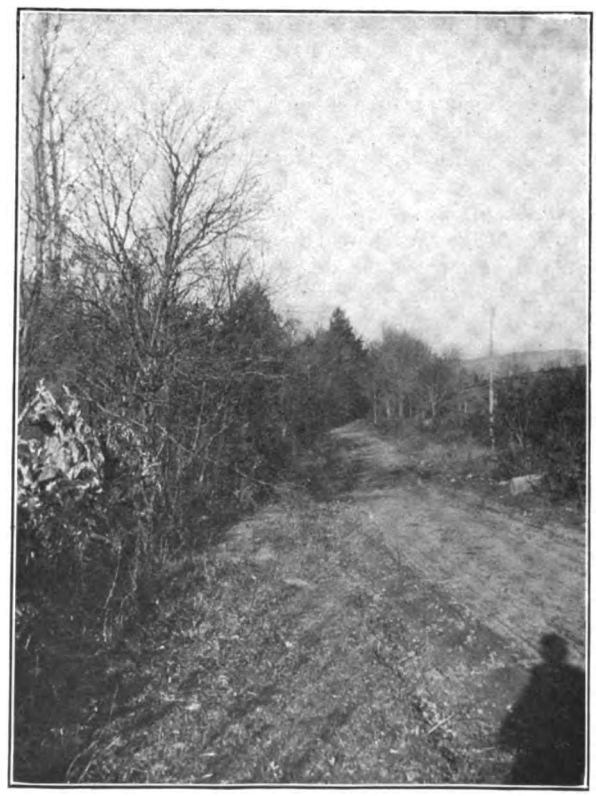
Subsequent reflection leads me to believe that Tobe was probably partly right, though it has not led me to regret the sixteen.

We followed the course the bird had taken, and she flew up again, but too far ahead of us to give us a shot. Then we tried our luck, or rather Tobe's luck, in several other propitious-looking bits of cover, generally choosing the edge of the woods where we could between us keep watch of the entire approach. Nothing, however, came of our drumming for some time. Then we found the best-looking place of the day, and in a position where we were all facing up quite a steep hillside we located ourselves again.

Here Tobe had drummed but a few times when, to use David's own words, "A little beauty of a bird came running down the hill toward me as fast as she could travel." Said he, "I got crazy just as soon as she hove in sight and banged first one barrel and then the other and away she went."

I could understand this easily, and there was plenty of evidence of the two shots in the big sapling some fifteen feet ahead of David that was cut off by his first shot, and in the handful of feathers that flew to the breeze after the second shot. But neither one brought down the bird, and Tobe, who seemed to have been looking all ways at once, was waiting until David stopped shooting, and as the bird veered around from the second shot the wily woodsman dropped her at a distance of not less than seventy-five yards. Such a shot was, of course, a marvel in the woods, and could only be called a chance hit. However, it delivered the goods, and I seldom find any fault with or pick any flaws in a chance shot which scores a hit.

Tobe tossed the bird over to David without a word other than, "Your bird,"



DAVID HAD BEEN DOWN ON THE MAIN ROAD

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and we went on to try further experiments. These resulted in Tobe and myself each shooting one bird, though mine dropped into an almost impenetrable mass of briers, and we lost half an hour in a vain effort to find it. I don't say that it may not have gone away on its own legs.

It was a long tramp that we had that day and we were so tired when we left Tobe to take a short cut for home that I nearly forgot to call him one side and offer him a couple of dollars. I might as well have forgotten it entirely, for he would not accept the money. "Ain't you my friend?" he asked. I admitted it. "Well, can't I give my friend a day's sport without him havin' to pay for it?"

"You sure can," I answered, and David and I both shook hands with him and went on.

But in spite of the fact that the experience had been an interesting one and possessed of a certain primeval sporting element, I think that I do David and myself only justice when I say that we both felt that we would not care to hunt partridges in that way again.

True enough, we had not accumulated too large a bag, though I know that Tobe himself often came home with half a dozen, in spite of the legal limit of four. The birds had not seemed any too easy to get, even when drummed out, but for some reason the game did not appeal to our sporting instinct, and, more than that, we voted it not nearly as much fun as the game of putting the birds up and shooting them on the wing.

We sympathized with Becky. We knew that there was something about fooling the partridges to their doom that did not accord with our instinct for fair play.

The little box may have had something to do with it, for I admit that it did not seem quite as bad when Tobe had one of the times drummed upon his chest with similar effect. The box, it seems, was his own invention, and had been made necessary by the fact that the other method made his ribs so sore during the season that it hurt him to breathe when going up a hill.

As we were slowly traveling home, David asked, "Wouldn't he take any pay for his day's work?"

"No," I replied, "we were his guests, and he gave us the best day's entertainment of which he was capable, and while he needs money as badly as anybody I know, he could refuse a two-dollar bill that would put him in good circumstances for a week."

"Well, that all goes to show that Tobe has some elements of sporting blood that aren't to be found in quite a lot of folks who would condemn him for getting birds the way he gets them. You and I don't know of so many people who would take us out and give us a day's sport without expecting to get something in return for it some day. Maybe, though, Tobe is paying you back for some previous favor?"

"Not a bit of it," I disclaimed. "He did this because he happens to like me. I never did anything for him, and I am sure that he does not expect me to, though I don't say that I never will."

"I want to go back and shake hands with him again," exclaimed David enthusiastically. "The man may be a pot-hunter for all I know or care, but he's got something in him that is left out of a whole lot of people."

Since I agreed heartily with this sentiment there was nothing to be said, and we both trudged the balance of the way home with something in our minds worth thinking about.

Stewart Edward White's Story of his experiences in the LAST VIRGIN BIG GAME COUNTRY begins in the April OUTING

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PUTTING THE BOAT IN CRUISING TRIM

By STILLMAN TAYLOR

Overhauling That the Boat Owner Should Do to Get the Most Out of His Boat for the Coming Season

THE arrival of the first mild days of early spring annually marks the awakening of our most enjoyable outdoor sports and recreations—it ushers in the season of rod and reel, and reminds the boatman that the days of his favorite sport will soon be here. In making preparations for fitting out for another season, there are many things to be attended to, for spring is boat- as well as house-cleaning time. Since motor boating is a sport appealing directly to the average man with an average pocketbook, the work necessary to put the large and constantly growing fleet of motor craft in commission is largely accomplished by the owner during spare time. To be sure, there is some hard labor involved, but there is likewise a great deal of pleasure in personally fitting out our own boat, not to mention the solid satisfaction of the skipper in knowing that this work is thoroughly well done and no detail of his "little ship" has been overlooked or slighted.

To the old seasoned hand, whom a long boating experience has taught the wisdom of adequately protecting the boat during the winter months, the spring overhaul consists principally of painting and varnishing, though there are some few minor repairs which should be promptly made. The experience of last year will doubtless suggest an alteration or modification here or there, and while these details are small items, they contribute greatly to our comfort while afloat, and the best time to attend to them is in the spring before the boat is launched. To put off work of this kind is likely to prove a source of regret later on in the season, and is not unlikely to mar the pleasure of a long-anticipated cruise. It is for this reason that a systematic overhaul of the whole craft should be undertaken at the beginning of the season.

When the winter housing of boards or canvas has been removed and all skylights, ports, and lockers opened wide to admit the air and dry out the interior, the boat should be cleaned and scrubbed from stem to stern. The flooring should be taken up and the bilge scrubbed out to make it sweet and clean. For a thorough cleansing the writer has yet to find a substitute for a generous supply of elbow grease and plenty of water in which a handful or so of washing-soda has been dissolved. The strong alkali cuts all grease and dirt and brightens up the flooring and timbers around the engine as nothing else will.

For this work a good scrubbing-brush with long, stiff bristles will be required and a couple of metal scrapers (which anyone can fashion from small scraps of sheet-iron by riveting a rod of soft Norway iron to form a handle about a foot long) will come in handy for digging out dirt from corners and other inaccessible places which are pretty numerous aboard ship. The hoe-shape and triangular forms are most useful, and two-inch blades are about the right size for convenient use. The ordinary putty-knife or steel paint-scraper is also a handy tool for this work.

To preserve the wood in the bilge, preservatives are often used, but the best protection against rotting is to give the under timbers and flooring a good coat

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of red lead or oxide of iron paint (common roofing paint). Of course, the wood must be dry before the paint is applied. Red oxide paint also sticks well to iron ballast and gives good protection to mooring chains and anchors. Before leaving the bilge, make it a point to clean out the limber holes so that the water may quickly drain to the pump. This useful device should not be overlooked, for packing wears out in service and strainers corrode and become clogged with use. Put the pump in good working order; you may need it some day.

As the work of cleaning up the interior proceeds, many small but needed repairs will surely be noted, whereby we can with a moment's labor make our summer home sound, more comfortable, and attractive. Doors and lockers are prone to swell and bind, screws work loose, and suspicious cracks and dents in the ceiling or paneling may need a little touching up. The judicious use of a few handy tools, a bit of putty, and a dab of paint may be given as a timely suggestion.

The Value of Paint

The bulk of the labor required to put the boat in the best possible condition consists of outside painting and varnishing. In painting, it is really essential to use only high-grade paints, and if the boatman is at all particular about the attractive appearance of his craft, some little pains should be taken to turn out a nice, smooth, workmanlike painting job. In the matter of selecting the paint and varnish some little care must be observed, for not all brands found reasonably satisfactory for other uses will stand the exposure and many hard knocks which paint intended for boat work is pretty likely to receive. There are paints and paints, also varnishes and varnishes, but the only paint for our use is that composed of the best materials. Only paint coming up to the highest possible standard will properly protect the boat throughout the season.

Cheap paints are not worth the labor of applying, since they begin to crack and peel immediately the surface becomes dry, and before much service the boat will be shedding from bow to stern. However, there are many first-class paints put up expressly for boat work upon the market, and most of these are well advertised. Many boatmen who, like the writer, have a propensity for doing things with their own hands, prefer to mix their own paint. This is not a difficult thing to do, and if good white lead is used for the base and the pigment thoroughly mixed up with good oils and turpentine, there can be no question but that a dependable finish will result.

For the hull, from waterline to rail, the most satisfactory paint is white lead mixed with pure turpentine only. This makes an almost pure "turp" paint and gives a very smooth skin, altogether free from any tendency to chip and flake under hard knocks. Another advantage in using a paint of this kind is that it rubs off just enough when we scrub down the boat to keep the surface smooth. Enamels and other hard-drying paints are undeniably attractive, but they are for this reason more prone to peel, and the thick layers of pigment must be scraped off every other year or so in order to produce a smooth surface. By using the turpentine paint this scraping is rendered unnecessary, and a good sandpapering is all that is required to prepare for the next season's painting.

But before the outside of the hull is ready for the paint, it should be made smooth. In case the old paint is rough and flaked off in many places to expose the bare wood, the edges of these spots must be smoothed down with sandpaper and the bare wood touched up with a little paint. If the hull is very rough, it will be found impossible to secure a good smooth surface by patching it up, and there is no other way but to scrape off the old paint down to the bare wood. This entails a deal of hard work, which may be hired, or done by one's self with the aid of a few sharpened steel scrapers and a good supply of paint or varnish remover.

Do not attempt to do the work with a gasoline torch, unless you have first acquired the knack of handling the hot blue flame, and this takes some little ex-

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perience. The varnish remover is a great labor saver and on the whole is more satisfactory than burning off the hard pigment. It is quickly slapped on with an old paint brush, and after a few minutes' standing softens up the old paint or varnish, which is easily shaved off with a putty knife or scraper.

In the matter of scrapers, the most handy tool the writer is acquainted with for doing this work is made from an old flat mill file, with the edge turned over to form a miniature hoe. If this edge is well tempered and sharpened by the smithy, the amateur is well heeled to begin the job. Some five or six of these scrapers should be in hand, and a file kept handy to touch up the edges, which are quickly dulled by the flinty scale of paint.

When the paint is removed down to the bare wood, go over the whole boat and drive in any nail heads that may have worked out. If the boat is comparatively new, very likely the plank edges may need smoothing up with a plane. Drive in all projecting nails and rivets first, set the plane iron rather fine, and plane with the grain, to avoid botchy work. Smooth up with a good sandpapering, after which all nail and rivet heads should be puttied up flush with white lead putty. The hull is now ready for the priming coat, and this should consist of pure white lead thinned to brush well with linseed oil. The first coat should carry a large amount of oil, since the bare wood will absorb it after the fashion of a sponge.

When the first coat is dry, a couple of finishing coats may be brushed on, always making sure the undercoat is thoroughly dry before applying the next. The second coat may carry one-third oil and two-thirds turpentine, but the last or finishing coats should be thinned only with turpentine to secure the best and most durable finish. Paint down to and let your brush overlap the waterline by a few inches.

If the boat is a new one, or in case the waterline is not cleanly marked, run in a groove by bending a thin lath (the long strips of pine used for making lattice-work are just the right kind of a batten for this work) and scribing along the edge with the tang of a file. A new waterline is easily made by this method, and a line that future paintings will not obliterate. The assistance of a friend will facilitate the work, since the batten must be shifted often to follow the proper curve accurately, though by lightly fastening one end with a small nail one can "strike" the waterline without assistance.

Should the boat be an old one and the calking is found to have started from the seams, it must be recalked to make the planking sound and tight. Calking is an art, as any visitor to a shipyard well knows, and one unfamiliar with boat repairing undertaking this work is likely to punch more holes in the leaky hull. Still, if the amateur exercises a reasonable amount of care and takes enough time to do the work well, there is no reason why he should fail to make his boat perfectly tight.

Going Over the Seams

First of all, clean out the seam of its old calking, paint, and putty. On large craft this is done with the aid of a "reefing iron," but in small and lightly planked boats a stiff knife is a good tool. For the average motor boat up to thirty feet or so candle wicking is generally employed to make the seams tight. In larger craft regulation calking cotton is employed, oakum only being used for large yachts or vessels. The candle wicking may be lightly forced to fill the seam by using an ordinary putty knife, but a calking wheel will roll the calking in the seam with less labor. For heavier planked boats, with deep seams, calking cotton is lightly driven in between the planks, and for this work a calking iron and mallet are employed.

Perhaps the most common mistake of the amateur is to imagine that a big wedge of cotton must be forcibly driven into the seam. The cotton should be firmly packed to fill the bottom of the seam, but too much force must be avoided, or the cotton will be driven through, and a seam thus broken must be repaired by nailing a butt block or batten to the inside of the injured planking. Do not fill the entire seam with cotton,

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but pack it lightly with a few well-directed taps of the mallet, leaving sufficient space for puttying up the seam flush and smooth. Before puttying up, brush the seam with a fairly thick coat of white lead, which will hold the putty and prevent it from falling out through shrinking when it dries.

The hull below the waterline should be well protected with two good coats of one of the many good brands of anti-fouling copper paint. This work should be only done after the top-sides of the hull are finished, when it is an easy matter to cut in up to the groove which marks the underbody, with the brush well charged with paint. Before the copper is applied, the surface should be well sandpapered and brushed clean to make a good foundation for painting. There is no advantage to be gained by letting copper paint dry out for a week or two before launching, and this job is generally left until a day or so before the craft takes the water.

Any one of the advertised copper paints is good, or the boatman can mix up his own bottom paint after this formula, which was given the writer many years ago by an old down-East ship's painter. This paint, which has been often tested on many crafts, is durable in service and gives good satisfaction. Procure one pound of red lead, four ounces of each of the following: Copper bronze (powder), arsenic, chrome yellow, and Paris blue. Add one pint of dryer, one pint linseed oil and one pint of copal varnish. Mix thoroughly by stirring all together, adding more copal as needed to thin to brushing consistency, then strain through cheese-cloth. This paint dries to a very attractive copper color, and two good coats will afford splendid protection to your hull.

For the cabin interior, white enamel is the most cheerful and attractive finish, and it is also the most serviceable paint, since a little soapy water will restore enamel work that has become soiled and dingy. Enamels can be mixed, but as there is no economy in so doing the more convenient way is to use one of the several ready-mixed brands. On new work a couple of undercoats of a turpentine paint will form a splendid flexible foundation for the finishing coat or two of enamel.

For the cabin top, deck, cockpit flooring, and seats, a pure white lead mixed with linseed oil and a little dryer is the most durable protection for these hard-used surfaces. Of course, this paint may be colored to any shade desired by adding any of the paste or tinting paints put up for this purpose. Dark colors are, however, never so attractive as a comparatively light tint, and a medium buff or yellow is the writer's preference. A deck finished in this color is easily seen in the dark, which point will surely be appreciated when night scudding is done.

Looking After the Motor

The power plant of the motor boat should be completely overhauled before the craft is put into commission. If this work is properly attended to at the beginning of the cruising season it will prevent many of the vexing breakdowns which so often occur to dampen the pleasures of a trip. To do this work well, the motor and reversing gear should be "knocked down," thoroughly cleaned, lubricated, and adjusted. Begin by stripping the engine of all its accessories, carburetor, magneto, fuel and water connection, etc. The cylinder walls and piston should be cleaned of any carbonized oil that may have become encrusted on their surfaces.

If the motor has not been neglected by the skipper, a good soaking in kerosene will help to soften up the hard residue. The use of one of the patent carbon removers is likewise helpful in cleaning the bore. While it may not be absolutely necessary to dismantle the motor, it is a good plan to do so, removing the cylinders that the piston and their rings may be better examined for possible wear. When lifting off the cylinder casting some little care should be taken to lift off the piston at its lowest point and in a vertical position. Failure to take this precaution may result in springing the connecting rod out of true.

In multiple cylinder engines mark each cylinder and piston before removing it, and also mark each piston ring as it is

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removed. A little file mark is sufficient to designate where each part is fitted, and mixing up will be avoided when ready to assemble. In motors of two or more cylinders the wear of piston and cylinder wall is never equal, and an exchange of pistons made while assembling will generally result in a marked loss of compression when the motor is given its first trial. Avoid this loss of power by making sure that every part is in its proper place.

Wear in the piston is pretty sure to show first in the rings, which should appear brightly polished on their faces. If this is not found so, and black streaks of soot (blow marks) are found, the ring or rings so marked are at fault and the gas is leaking past them. The obvious remedy is to insert new rings to form a compression-tight union between piston and cylinder bore. The job of fitting new rings is best left to a good machinist, or an equally satisfactory way is to order new rings from the manufacturer, who will supply the proper parts fitted for insertion in your engine.

Another point to be examined for looseness and wear is the piston-pin, which must, of course, be a good snug fit, and if found loose the slack should be taken up. In most cases this adjustment is simply made by setting up the anchoring screw a few turns, but in case the piston is badly worn, or is a loose fit in the bosses, a new pin should be put in. It is never wise to put off a repair of this sort, since even a slightly loose piston-pin is likely to work loose while running, and projecting slightly beyond the piston score the cylinder walls and make a new cylinder necessary.

The main or crank shaft bearings of the motor should be cleaned up and adjusted. In setting up the shaft remember that a little play is essential for smooth running, but too much slackness results in rapid bearing wear. About .003 of an inch allowance is the usual practice in the assembling-room.

The two-cycle type of engine differs much from the four-cycle type, and while much of the information given covers both designs, there are a few points peculiar to each that require attention. For instance, in the two-cycle motor the packing-ring at the base of the piston should be examined at overhauling time. This must be a good gas-tight fit in the cylinder, and if worn the packing should be renewed. If the motor is of the three-port type, the automatic intake valve should be examined, and if the valve or its seat is rough, it should be ground in with water and powdered pumice-stone, or flour of emery and oil, until it is smooth and bright.

The four-cycle engine is provided with mechanically operated intake and exhaust valves, and these should be ground in to make them perfectly gas-tight. Valve grinding is done easily by smearing a little pumice and water on the face and seat, and then rotating the valve by inserting a screwdriver in the slot cut in the head for this purpose. A bit of brace is convenient for the work, or the handle of the screwdriver may be rotated between the palms of the hands. Continue grinding until the valve and its seat are perfectly smooth and all score marks and scratches removed. If the faces of the valves are badly pock-marked, some little labor may be saved by first dressing down with a smooth-cut file, and then grinding in to smooth them up.

The reversing gear should be dismantled and cleaned with gasoline or kerosene, lubricated and adjusted. In adjusting make it a point to ascertain that the brake band is kept clear of the drum and that there is no considerable play in the clutch.

Attention should also be called to the steering gear. The cables should be looked over and a new length spliced in where badly worn. Phosphor bronze is really the only satisfactory cable for the cruising craft, and to make it easy to take up any slack a small turnbuckle should be spliced in, thus making it a simple matter to adjust the tension of the steering cable at any time.

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THE SHANTY ON THE BEACH

By PERCY M. CUSHING

The Poacher Fights His Battle Against Wind and Ice and the Fear of the Law

BLAKE leaned over the cot in the darkened room. "Feel pretty mean, Sonny?" he asked. There was a faint murmur of assent from the huddle of bedclothes. Blake bent closer to hear. "Pain in your chest getting worse?" he murmured. "Don't think of it, Son—that's the best way."

He hitched his left arm involuntarily at the suggestion. He felt the hot stab of the bullet-hole as sharp and stinging as when the crack of the game warden's revolver had put it there an hour before.

"It's the best way," he repeated absently, "don't think of it." He pulled back the pink calico curtain and passed into the room beyond that served all purposes in the shanty save that of sleeping. He was careful to draw the curtain quickly behind him. He moved over to the pump at the sink and filled a tin dipper with water. As he turned with it he glanced at the oblong heap that lay beneath a strip of mildewed canvas in the corner farthest from the stove. Frowning, he passed back into the smaller room, again being careful to draw the curtain shut, and sat down on the cot that shared the space in the dark cranny with that on which the boy lay.

"Here, drink this, Sonny," he said. He held the dipper out awkwardly in the dark. "They used to tell me," he muttered, "it wasn't good to give 'em water when they was burning up. But I'm going to chance it."

In the gloom he groped with a big hand. He touched the face of the child and felt the heat of the fever strike through the callouses on his palm. He hesitated a moment, then got up and went out into the larger room. He stepped to the west window and hollowed his hands against the glass and put his eyes up to them. He felt the shanty staggering in the grip of the gale. He felt the draft sifting through the cracks in the boards against his knees, and it was ice.

Through the window he saw only the blackness of the night. Out into it westward the beach pointed a long finger of storm-ridden desolation and bleakness. Somewhere down that stretch of sand dune and beach hollow, of scrub and brush and brier, the wardens and their posse were looking for him. He grinned coolly. It was an old story. They had been trying to get him for months, and he had promised they would never do it. So that afternoon when the chief warden had sworn in a posse of citizen deputies in the village and, crossing to the beach, had caught him red-handed with a dozen wild geese, and the season closed six weeks, he had tried to make good his boast.

He had not waited for them to begin. He had fired first, and in the gathering night he had seen one of them go down to the red flash from the .38. It was too dark to see more, and when he had emptied his revolver he had turned desperately for the scrub that lay in the hollows of the beach hills. As he ran he heard the spitting of the shots behind him, and felt that bee-like sting high in the muscles of his left arm. Then he had reached the scrub and dodged into it.

For an hour he kept going. Then the shack had loomed before him unexpectedly, and because it was dark and apparently deserted, and because he was nearly exhausted from the pace he had kept, he opened the door and entered. It was when he was inside that he had heard the labored, wheezing sound from

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the cranny bedroom and had frozen with apprehension before he divined its cause. Then he lighted the lantern on the table and hung it on the wall in the big room. He had known the light was dangerous, but—there was that insistent, gentle wheezing sound. There was——!

With a start he jerked himself back to the present, and turned from the window. The risk of his position sharpened his wits. It was time he acted. Any minute they might be there, the posse. Southward was the Atlantic Ocean, hardly a stone's throw distant. To the north the eight miles of the bay, ice-choked and storm-swept, barred the way to the mainland. The wardens, combing the narrow, uninhabited strip of sand, could not miss the shanty. Even if there was no light to guide them they would surely find and go through it. And he was there——!

He thought of the grotesque figure the deputy warden had cut as he spun around and went down to the bark of the .38. Swiftly it came to Blake that one course lay open to him. He could push on east until he came to the Narrows, where the bay tapered until one standing on the rib of the beach could pitch a stone across to the mainland. That was fifteen miles. He knew that the shallow water there would be frozen solid so that he could cross in safety. Once he had struck the woods of the mainland he could work north into the villages beyond pursuit. Conditions favored him. With the gale at his back he could accomplish the fifteen miles before dawn. The posse would not count on such a move. They would be searching the beach for him, not dreaming that he would push on to that long tramp in the blackness of the storm. It was almost certain escape.

But——! The frown crossed his heavy face again. Behind the pink calico curtain across the room was that kid. It wasn't his kid, to be sure. But it was alone, and sick, and suffering. He had seen enough of pneumonia to know that labored, irregular breathing and the burning fever. No, it wasn't his kid. Most likely it had belonged to the thing he had stumbled over at the door when he blundered into the shanty—the thing that he had pulled into the room and that now lay under the mildewed canvas in the corner. He had almost forgotten that lifeless thing, in the problem that had been muddling in his brain.

"She must have been his ma," he mused half aloud. "Wonder where his old man was? Most likely he didn't have any."

He took down the lantern and examined the stove. There were no signs of tobacco juice, and he replaced the light.

"Most likely not," he went on. His forehead wrinkled, as he spurred an imagination grown rusty with disuse. "She must have started east," he reasoned. "Started for help for him when she saw he had to have it. Thought she could make the Narrows and cross to the main shore. And when she saw she couldn't make it she tried to come back." He shook his head. "It must have been tough on her to get right here to the door," he growled. "To get right here before—she stopped for good." He glanced toward the canvas. "It seemed a shame to leave her lyin' out there after she came back so far," he said, and it was half an apology. "And there wasn't nothin' handy but that there strip of canvas."

He went over to the lantern and turned it lower. Then he crossed to the calico curtain. In the cranny bedroom he slipped out of his undercoat and added it to the bedclothes that wrapped the boy. Then he pulled on his heavy outer coat again. For a moment he hovered there, feeling the fan of the cold gale that sifted through the cracks in the wall. "You got to go it alone now, Son," he whispered half to himself. He turned toward the door as though to go, hesitated, and came back. In the gloom he groped with a big hand. "I'll be back," he said. He paused awkwardly. "And, Son," he added, "she'll be a-comin' along after a while, mebbe. She'll be—a-comin' along." He dropped the hot hand of the child and slipped hastily from the room.

Blake had stumbled upon the scooter pulled out on the shore before he had come to the shanty. The little craft must have belonged to the woman. It was but the matter of a hundred yards

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to it. The oars and shoving pole and ice hook were in her. He gritted his teeth at the throb in his shoulder as he gripped the ice hook and pushed the amphibious craft, ice boat and water boat alike, out over the three hundred yards of solid ice that reached out from the shore. He felt the fierce thrust of the gale and realized the crushing weight of it. It roared its wild harmony along a thousand miles of winter coast, and sobbing over the bleak sweep of the bay snatched the breath from his lips.

Shooting an eye to the northward, he sensed rather than analyzed the risk he was taking. Weather-toughened and hard as he was, there flashed before him the vision of a scooter stove in the ice and the grip of those eight miles of frozen bay closing on him for good. But he did not hesitate. The edge of the solid ice came to him, and he dropped the scooter off it into the mass of floating drift that choked the way northward.

Two hours, and he was near the middle of the bay, fighting the set of the drifting ice cakes as the tide swept them westward through the channels. The heavy cakes caught the scooter forward and spun her around; then, before he could get her clear and straightened with the ice hook, another cake would whirl her around again. And always there was that peril of her jamming between two cakes and being crushed to kindling in an instant. Where the floe did not menace in the channels, great fields of porridge ice, thick, cloying slush, confronted him on the edge of the flats. Here he was forced to use the oars. He threw all his strength into each stroke, and at each the scooter ground forward a few feet and stopped lifeless and short the instant the pressure on the oars was removed.

Foot by foot, with his breath coming in short gasps, and the wound in his shoulder keeping time to his efforts, he won his way up on the shoals where the ice was hard enough to bear the weight of the scooter again, and he could pole. Once there, the boat ran swiftly on her runners, and he made good time until he reached the next sweep of porridge, and beyond that the channels again, where the ice cakes drifted. But he kept on, and recurrently, as he paused for breath, there swam before him the vision of a tumble of bedclothes in a dark room, and beyond a calico curtain, in the yellow light of a smoky lantern, a silent watcher beneath a strip of mildewed canvas.

After a long time, it seemed many hours, the shore of the mainland came to him out of the night, a long arm of a point, with the white ice piled up along it layer on layer. It was Bayberry Point, he knew, and also he knew it was two miles from the village—two roadless miles through the open meadows and the salt holes. He pulled the scooter up on the piled-up strata of the shore ice, and beat the blood back into his aching hands. Then he turned toward the village.

On his cheek, for he was crossing the wind now, he felt the lifting thrust of the gale, and it cut to the bone. Faintly he heard the frozen crunch of ice under his feet in the meadow depressions ere the sound was snatched by the wind. His nostrils seemed to adhere as he drew in his breath. He knew the sensation. It told that the mercury was going lower and lower. Behind him the wind-billowed night closed black as ink.

Presently a yellow street light flickered at him; then another. His feet told him that he had struck the village road at last. He pushed doggedly ahead. He passed a dark saloon, and dully it came to him that the hour must be after midnight. Once before he had been in the village. He had gone after supplies, and he had seen the sign of Dr. Sturgis. He was glad he remembered the house. The windows stared vacant and black as he went up the walk. Even the doctor's lamp in the hall was out. He rang the bell. There was no response. He rapped on the door. There was no answer. He beat furiously on it with his fists. On the second floor a window went up, shrieking with the frost. It was a woman who called down at him. The doctor was away. He had been away since morning. He had gone, she did not know where. She did not expect him back that night. No, there was no other doctor in town. And into the heart of John Blake came a great despair.

For a moment he stood there, inert, helpless, hopeless. Then he turned

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away. He did not hear the window scream shut behind him. He had done his best. Now there was nothing left for him to do. Sturgis away; no other doctor within reach. No, there was nothing more——! Out of the black rush of the night it flashed before him —a restless tumble of bedclothes in a dark room, and beyond the calico curtain, in the yellow light of a smoky lantern, a silent watcher beneath a strip of mildewed canvas. No, there was nothing left for him to do but—go back to the shanty on the beach.

When the last street lamp had become a pale, winking star over his shoulder and the level of the frozen meadows stretched their desolation before him again, Blake tucked his chin into his breast and fell to counting the monotonous lift of his feet until Bayberry Point once more flaunted its white arm before him. Then he broke the runners of the scooter free of the frost and shot the craft away from the shore. The tide had opened a clear streak of water, and the first mile was easy. Beyond that he faced the test.

The full force of the ebb was getting in its work now. When he had come across it had just begun. Now it was running fiercely out toward the west inlet, sucking down through the deep channels like a mill-race, peopled with great floating ice fields, broken and serried, and constantly rending asunder and grinding and piling up on each other, as the floe caught on the edge of a sand bar, and the pack behind crushed down on it. The swirl of the gale tore the water between these shifting floes to white shreds, and the foam froze in mid-air and jingled away to leeward in fine, wind-driven ice dust.

Standing well aft in the scooter, his big body braced to the lurch of the sea and the jar as the floe cakes were encountered, Blake handled the hook that was sheathed half-inch deep in ice. The scooter herself was encrusted from stem to stern, and the extra weight rendered her clumsy and unwieldy. In the depths of Blake's beard the sweat formed icicles, and the drift of spray, torn up by the wind, completed the work until his face was armored in ice. The stab of the frozen gale cut to his marrow, but he held doggedly to his course.

Like a forlorn ghost the ice-clad buoy at the head of Cap Tree Channel waved him a ghastly greeting and dropped into the night behind. He felt the shift of the tide when he reached Benson's Shoal, and knew that half the way lay over his shoulder. Then, later, the nose of the scooter pounded into hard ice. It was Toby's Flat at last, and sick with weariness and cold, he stopped to gain his breath. He balanced himself carefully with the ice hook against that wagging of his knees, and with sheer force of will fought off the drowsiness that for an hour he had caught again and again stealing upon him.

Even in the midst of the grimmest toil men fall asleep. It is the very monotony of the effort. And Blake knew that to sleep meant to die. There were but two more miles to cover. He gripped the ice hook, and set his teeth. Faltering on his wide-braced feet, reeling, blind with weariness, numb with exhaustion, half dead with cold, he covered those last two miles, staggered from the scooter, and pitched forward on the frozen sand.

For moments he lay there while the breath came back to him. Then he got to his feet. Fate had been kind to him that night. He had made his landing hardly a quarter-mile from the place from which he had set out. He saw the huddle of the shack squatting on the sand. He saw the light burning. He went toward it. He reached the side of the shack and started around for the door, and stopped short. Through the single window he saw a man.

Instinctively he crouched forward, eyes narrowing, the grip of the cold and exhaustion forgotten. The man sat on the broken chair in the middle of the room. He had a close, bristly, red beard. He was short, and dumpy, and squat. He was staring straight ahead of him. This much Blake saw and his subconsciousness completed the story. They had followed him to the shanty—the posse. One of them had been left to watch it, while the others pushed on down the beach.

Blake saw his course clearly. It

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flashed before him quick as daylight. The man inside the shanty did not know of his presence. The way eastward down the fifteen miles of frozen sand still lay open. There would be slight chance of his meeting the posse in the dark, even if the men had gone on east. It was easy. He hesitated. There was the scooter also. He had crossed the bay twice in her that night. Could he cross again? He shuddered at the thought of it! No, clearly the course lay east down the beach to the narrows, thence to the mainland on the solid ice.

He turned for one last look at the man inside the shanty. But as his eyes came close to the window-pane, the deputy warden with the red, bristly beard and the chair on which he sat faded to oblivion, and before the vision of John Blake rose only the picture of a silent heap beneath a strip of canvas bathed in the yellow lantern light, and across, behind a calico curtain, a sick child tossing in the delirium of fever. It was the thing that had sent him across the eight miles of frozen despair for help, and when there was no help had drawn him back again. It was a thing too primal, too deep founded in his nature for him to fathom, but which he obeyed unreasoningly. It was that which comes oftenest to fathers of men, and which few fathers even understand. Instinctively he placed his face closer to the window. How did he know what became of that kid? It might be——!

The vision passed. The red-bearded deputy swam again into Blake's eyes. He had not moved. He was still sitting in the broken chair, apparently in thought. Perhaps that man had sat quietly there with that same smug expression while the spark of life behind the calico curtain flickered and went out. Perhaps the sound of a fretful little voice had left him unmoved. Perhaps——! Something rumbled strangely in Blake's throat. He went around the corner of the shanty. One long bound carried him through the door. The squat man with the red, bristly beard met him half-way. They went down together, rolling over and over. The broken chair and the table overturned upon them, and then Blake closed the fingers of his right hand on a thick, whiskered throat, and with his left knee, pinned a set of heavy shoulders to the floor.

"Now," he gasped, and his breath whistled in his throat, "what did you do with him—that kid?" He shook the thick neck violently. "Did you lay a finger on him—tell me, before I cut off your wind for good?" His eyes glittered in half-mad fury, his lips wreathed back from his teeth like a dog's.

The prostrate man gasped for breath. His throat worked spasmodically. "Let me up," he gurgled. "I did all—I could. His temperature—104—I——" His tongue clucked dryly.

Something flashed through Blake's mind—something he merely sensed, but that left him cold and tingling. He thrust his face close to the purple face beneath him. "Who are you?" he demanded hoarsely, his fingers loosening instinctively. "Quick, man, speak!"

"Sturgis!" the answer was a strangled whisper. And Blake, staggering to his feet, dragged the doctor with him.

Dr. Sturgis gripped the tin dipper Blake handed him eagerly. "That's better," he croaked, feeling his throat.

"Lord, man," Blake burst out hoarsely, "if I'd a-known——!" He ran quickly through the story of his trip to the village and of his return. "I didn't know you," he said. "Thought mebbe you might have harmed him. I'm sorry I treated you rough, and you the very one I wanted most to find. I——"

He reached for a quick breath as his own position leaped before him. Did the doctor know who he was? For the first time he noticed a big blue revolver at Sturgis' hip, and wondered why he had not used it. His own was empty. He saw his best chance and took it.

"You see, Doc," he lied, "I was clammin' along the beach and got ketched in this here blow, and I just stumbled in here and found him. It didn't seem quite square," he hesitated and shifted his feet, "to leave him all alone, and him sick and his old woman done for. So I just shoved over to the mainland for help. When there wasn't no help I just shoved back again." He paused. The doctor had been looking at his frost-blackened face.

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"He's all right—the kid," he said presently, and felt his throat. "Resting comfortably. I've been here right along." His tone was brusquely professional. "The fact is, he's asleep."

Relief showed plainly in Blake's face. He shot a crafty glance at the doctor, but the face of the other was expressionless. No, Sturgis did not know him, and he drew a long breath.

"Mebbe," he said awkwardly, "I might—just slip over," he indicated the calico curtain, which was drawn tightly, "and have a peep at him—just sort of —for instance?"

Dr. Sturgis straightened on the broken chair.

"Nothing of the sort," he said. "I forbid it. He is not to be disturbed. I will not take the consequences of any such thing at this time."

Still Blake hesitated. There was mild persistence in his voice.

"You sure he'll make it, Doc," he asked. "Sure he'll sort of get across the open water, and—and pull through onto the hard ice, safe and solid?"

The doctor met John Blake's eyes with a challenge in his own.

"I am sure of it," he said, with calm conviction.

Blake edged to the door. "Guess I'll just step down to—to the shore and see how the ice's makin' in," he said. "If you want anything an' holler, an' if I happen to hear you, I'll come," he added.

There was a trace of a smile on Dr. Sturgis's face as the door closed. He pulled the broken chair up to the table, drew a small black case from his pocket, removed his coat and shirt, and began quietly dressing a bullet wound in his shoulder.

"You shoot better than you lie, Mr. Blake," he commented grimly. "I may be a bad officer of the law, but I think you earned the way east to-night." And after a little time he added: "There's something wrong with the Providence that wastes a heart like that on the soul of a crook."

When he was through with the dressing he stepped over to the calico curtain, drew it back, and stood there looking in.

"No," he said presently, and he was thinking of Blake, "I hadn't the heart to tell him." He glanced at the faint outline beneath the bedclothes that now were spread strangely smooth and silent. "And after all, he is—asleep," he finished.

PACKSACK LUXURIES

By KATHRENE GEDNEY PINKERTON

WHILE the trip of a few days demands no such thing as a luxury, and the daily menu of baked beans, boiled beans, biscuits, bacon, and boiled rice is not persisted in long enough to rob it of its novelty, on the trip of weeks nothing is greeted with greater acclamation than a culinary achievement which at first thought would seem impossible in camp. More especially is this true if the party has been exercising spartan virtue in "going light."

There is always a rainy day, a late supper, or tired campers, when those who do believe in carrying a luxury for its psychological effect may bring it out to meet with general approval. For this reason some campers carry a pot of jam or marmalade. This is always welcome, but that very element makes it short lived, and jam or marmalade do not lend themselves to the "dressing up" of many dishes. There are, however, a few condiments and foods, possibly classed as luxuries, which are light, easily packed, and may be used in innumerable ways to enliven the menu.

Tomatoes are universally liked and, while canned tomatoes are nearly always impossible, a few of the smallest size cans of tomato puree, or the concentrated

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tomato, will open a new field in camp cooking.

With them is possible a nourishing dish of spaghetti or macaroni. The spaghetti cooks more quickly, and is easily carried in a food-bag if broken in small pieces. For a cup of the broken spaghetti, dice one large onion and a quarter of a pound of bacon and cook in a frying-pan until the onions are a light brown. Mix with this one small can of tomato puree and, if you have it, a half cup of grated cheese. Season well and combine this with the spaghetti, which has been boiled and blanched in cold water. Place in the baker in moderate heat for an hour.

Grated cheese well repays for its transportation in the many ways in which it can be used. Bottles of Parmesan grated cheese are obtainable, but we buy plain American cheese and grate after drying. It should be packed in a push-top tin well lined with oiled paper.

Tomatoes form the necessary element in Spanish rice, which is an appreciated change from the boiled rice of camp. To make this mix two cupfuls of boiled rice, a large diced onion, and a can of tomato puree. Season with plenty of cayenne pepper and bake in the reflector for an hour.

Or, lacking the tomato, serve a dish of browned rice, which has a nutty flavor not obtainable in the usual methods of cooking this cereal. Heat two tablespoonfuls of lard or bacon drippings and pour into this one cup of well-washed rice. Fry until a light brown. Then pour into the frying-pan sufficient hot water to cover. Boil furiously until the kernels are tender. Before serving, allow the water to cook away either by hanging in moderate heat in a kettle or by carefully watching the frying-pan. Scorched rice is impossible.

Vinegar may be carried in a stone bottle or in a glass flask. A small quantity will be well worth while. A tablespoonful of vinegar in simmering meat will help to make tender the tougher pieces. A tablespoonful added to rabbit will eliminate that "rabbity" taste.

With a small amount of vinegar a very good imitation of brandy sauce may be compounded for fruit and cottage puddings. Mix well one cupful of sugar, one tablespoonful of corn-starch, and one tablespoonful of vinegar. Pour over this one cupful of boiling water and allow the mixture to come to a boil.

With vinegar and evaporated eggs a very good salad dressing is possible. This is good on fish salad and on any of the salad greens. Mix well one tablespoonful of flour, one tablespoonful of sugar, one teaspoonful of salt, one teasponful of mustard, and two tablespoonfuls of egg powder. Pour over this one-half cupful of scalded vinegar and one-half cupful of boiling water. Allow this mixture to come to a boil, stirring carefully to avoid lumps.

In making fish salad flake the fish, add a small amount of diced onion and chopped sour or mustard pickles if you have them.

A very good French dressing may be made by combining vinegar and hot bacon grease, seasoning to taste.

All the ingredients of fudge are in the usual packsack. Cocoa serves as well as chocolate. Let the sturdy camper laugh. The seasoned camper will not. I know of no more simple way to satisfy that woods craving for sugar and chocolate.

An iced camp cake will astonish and delight. Yet all the ingredients are carried by any camper. Wet one cupful of sugar with five tablespoonfuls of milk. Place over the fire and stir until it boils. This is most conveniently done in a frying-pan. Boil five minutes without stirring and then set in a dish of cold water. Flavor and beat constantly until it becomes a thick, creamy frosting. Cocoa or lemon serve quite as well as vanilla for flavoring. When cocoa is used, boil only four minutes.

Ingenuity can devise any number of dishes unusual for the camper. I have given only a few, but these few and many others are possible by the addition to the food list of a little cheese, a little vinegar and concentrated tomato, two or three pounds in all.

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AFTER CARIBOU ON THE GANDER

By ROBERT TYLER

Humors of the Camp and Adventures of the Field in Newfoundland

WE wanted to be sure of a boat, so we hired one and took it with us. We knew it wasn't a new boat, but it was painted a baby blue and it snared our imagination. All the outfit was ready—we were ready—Esau* and Bonair John (phonetic spelling) were ready, even Brighteyes was ready. I emphasize this latter fact, for that was the very last occasion that Brighteyes was ever ready for anything except his grub. When the boat hit the water, the trouble began. For four mortal hours we caulked and pitched and tried to think of suitable things to say. Then we launched her again. She leaked, but with two of us to bail, perhaps she wouldn't sink.

We left Brighteyes at Glenwood (lovely name) to follow us up the Gander with a new boat, or with another boat—any other boat. We had intended to go into the Terra Nova country, but five parties had already gone in. Only one party had gone up the Gander, so we chose the Gander.

It was a long and toilsome trip across the twelve miles of Gander Lake to the mouth of the river. Esau and John did the rowing. The bailing was real toil. I bailed. My partner advised me how and when to bail. At sundown we sighted a camp-fire smoke at the mouth of the river about a mile away. It reminded us of our appetites, so we pulled the boat up on the shore of the lake and made ready our first camp.

We had packed a separate bag of provisions for going in, hard bread and canned stuff, so we needed the fire only for warmth and the tea; yes, one other thing, to dry the boat, that we might pitch her some more in the morning. We were going to do this because we had the pitch, not because we thought it would do any good. Then, with the light of our first camp-fire burning dimly and the whispering of the lake in our ears, we fell asleep, face to the stars.

I was awakened by a splash. Leaping salmon, I thought. It wasn't. My partner had removed a cobble from under his back and flung it far. Of course, he could have put it a little to one side with the same physical advantages, but flinging is *so* expressive. Man is never quite happy. Less than a half hour later, he was quarreling with the hole the stone came out of.

We boiled our tea long before daylight the next morning. Then we pitched our ark without and within, loaded our outfit, and started. Just as we reached the mouth of the river, we saw the boats of the other party going around a bend.

For some reason Esau considered this in the light of a personal affront. It was his river anyway. Until I heard what Esau said about those other guides, I had no idea that the chill and laconic Newfoundland idiom was capable of such luxuriant effects. He mixed an equatorial noon with the Aurora Borealis, and never missed a tint. He declared that he would pass that other party if his body froze, and his soul sizzled. That he would—I'd like to write down just what he said. Its expressiveness would enrich the language, but I will not expose his genius to unworthy and ineffective imitation.

It would take a day to get into the

* Esau Gillingham, Glenwood, Newfoundland, one of the best guides I ever had.
R. T.

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shooting country—keep out of the way of the other fellow after you get in—but, going in, let the best man win!

The water of the river was low. With our rifles and light packs we set out along shore on foot. On the east side of the river there is a good portage road which goes up the river for thirty miles. On the west side for about six miles there is a very fair trail. We took the trail.

We saw a few duck, and infrequent caribou sign. The grass grew high and rank in the bottoms, but on the river banks it was sparse. We found blueberries of very large size and fine flavor. These grew so thickly that by spreading the fingers so as to pluck them readily, twenty or more could be gathered at a single grasp. Much golden rod in some places. Many pretty purplish bell-shaped flowers on the higher grounds—bluebells, I think.

Beating the Enemy

We passed the boats of the enemy after a three-mile walk. They had an excellent equipment, good boats, four or five guides, but the guides had whiskers, long, spade-shaped whiskers. I have always been prejudiced against guides with that kind of whiskers. They add dignity, but they discourage effort. When I saw those whiskers I was thankful, for I realized that Esau's soul would have a fighting chance.

At about eleven o'clock we reached the "Cliffs," or narrows, about six miles from the mouth of the river, where we had agreed to wait for the boat. There was nothing else to do, so we got in the sunshine under the lee of a rock and slept.

I awakened first and found that our boat had almost caught up with us; it was, in fact, within a few hundred yards. Esau was poling and Bonair John was bailing. Long before they arrived, it was apparent that something was wrong. When the boat touched the shore, Esau retained his place. Since we left him, he had, evidently, examined the boat with anxious solicitude. His opinion of her had no doubt been carefully formed and unalterably fixed. Also it seemed that he knew much about the owner of the boat. He told us all about both, told us so that we knew.

Anyone could understand Esau. He had a rare knack of expression.

Well, it was the boat again, of course. No use pitching her this time. We must pack. After lunch, our stuff was taken out, and part of it cached. Abandoning the boat, we started up the river.

The packs were of varying weights, Esau, of course, with the heaviest; Bonair John, about sixty years old, little, but wiry, plucky, and accustomed to the toil, took a lighter one, while my partner and I contented ourselves with small gabardine packs in which were the most important of our personal belongings. I wanted to take a heavier pack, but my partner dissuaded me, so I had to dissuade him when he suggested that he could carry more weight.

It wasn't all laziness; it was feet. I had hunted caribou in Canada, but the hunting there was on mossy barrens, where the high moccasin was the proper footgear. I had provided myself with moccasins, and, with the superiority of experience, bully-ragged my partner into doing the same. I would take moccasins again, but the next time I will also carry a pair of thick-soled hunting boots liberally studded with soft iron nails.

We had walked on broken rock until noon, with but little discomfort. After lunch, when we got going again, my partner asked me if I was acquiring any new experience with moccasins. The question was propounded in a disagreeable way. The moccasins were all right, but Newfoundland wasn't. I told my partner this, and I am sure that any reasonable person will admit that my answer was to the point, my explanation satisfactory, but my partner grunted and said: "Oh, hell!" Conversation became less general after this.

I was not sorry because I needed my wind to walk with.

After we had left the boat some three or four miles behind us, we came in sight of the first flats. Esau said that it was a good place for caribou, but we hardly expected to see one, for the other party had caught up with and passed us, and

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had camped only about two miles ahead of us. We could see the smoke of their fire.

My partner sighted a caribou some distance ahead. He and I proceeded alone until we got within about three hundred yards, when we examined the beast with our glasses. It was a little after sundown, the light was not the best, but it was plainly an old buck with many points to his credit. My partner, like the true sportsman and considerate gentleman that he is (except about moccasins), insisted that I should shoot. We finally agreed, however, that the head was rightfully his.

The animal was feeding. The wind was right and we wanted to see if he could be stalked as can the wapiti. We started toward him, moving when he had his head down and freezing when he raised it. In this way we got within two hundred yards. We stopped at a boulder, and my partner made ready for his first rifle shot at big game. At the crack of the rifle, the stag stumbled. It was easy to see that he was hard hit. Recovering himself, he started to run down the flat, but after going about a hundred yards he fell.

Esau and John waded across to him. My partner couldn't stand the pressure, so he, too, started. He didn't wade decorously—he galloped—he whooped—and, although I wouldn't wade and couldn't gallop, I whooped in hearty sympathy. The bullet had entered about three inches above the heart—a well-placed shot and a clean kill.

They dragged the carcass from the flat to the shore, and we began preparations for camp—real camp—camp with meat. It took some time to skin the beast and salt the hide and scalp. When it was over we were ready for the fried liver. It should always be liver or heart if one must eat right after the kill, though if you are good and hungry the raw meat is not half bad. The head should have had about forty-four points, but only one side was fully developed. It counted twenty-seven points.

After assisting my partner to choose a place to hang the head in the house he then and there determined to build we turned in. The only real troubles are small ones. Great troubles stupefy. My feet are small. I had never noticed it before, but they *are* undoubtedly small. To travel comfortably at my weight on rock, the bearing surface of my footgear should be doubled.

When we got under way the next morning my feet were bad. Now when your feet hurt, limping is a natural and reasonable relief, but limping with both feet is neither satisfactory nor impressive. I say it is not impressive because my partner told me so. Secure in his double immunity of abundant feet and parsimonious weight, he railed at me. I was actually so depressed that I couldn't rail back. There are so many things I might have said (I've thought about them since) that would have made that morning of discomfort a blessed and enduring memory. Just to show his superiority he would walk on ahead, then stop and pick blueberries until I had passed, then repeat. He wouldn't always speak when I went by, but he always looked.

The First Caribou

We had walked only about an hour when we reached Cooper's Brook. Here the other party were in camp. We found that they intended to remain there hunting the river and the barrens, so we crossed the river and struck the portage road where the going was all right.

We had not walked more than a hundred yards when a big stag jumped and ran around a bend of the road—a fair shot had anybody been ready, but nobody was. If one is seeking a caribou trophy, it is bad policy to shoot under such circumstances. While you can see the spread, you cannot tell about the points or the brow antlers. The mere fact that the brute is big helps but little. Any swiftly moving game, unexpectedly sighted near at hand, seems much bigger than it really is.

Esau told us to be on the lookout as he thought we would see the animal again a little farther up the road. Judging from the rate he was going when he disappeared, I felt that this prediction was an indication that Esau possessed an extremely optimistic temperament.

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About three-quarters of a mile farther on a caribou jumped from the edge of the bank and ran along the flat. Thinking it the one we saw on the road, I fired and paunched it. While my finger was pressing the trigger I knew that it was a young animal with undeveloped antlers, but it was too late. Every hunter of big game knows the remorse that follows the kill.

When the trophy is a fine one, or when the success is due to a fair outwitting of the game, these feelings soon give place to gratification; but where the killing is unnecessary, and due simply to a clumsy mistake, the depression is more lasting. I spent a most unpleasant evening. I am afraid the others did too. The killing was bad enough, but that I had been so thoughtless as to shoot so near the camp of the other party was perhaps worse. When I can stalk game without frightening it, there is very little temptation to shoot, but if the game is running when sighted, the rifle often cracks before it should. I do not know that the other party regarded the shooting as a wilful violation of the ethics of sport. Whether they did or not, a sackcloth suit just then would have suited my humor.

That night we tried pancakes for the first time,—soda mint pancakes. Purchasing provisions is not a task for two men. When two men buy, carelessness is induced by the divided responsibility. We forgot the soda. I didn't forget it, I thought my partner got it. He says he thought I got it. Anyway we were confronted with the prospect of a three-weeks diet of paste. But, see how the ills of men are converted into benefits. I had for some months been troubled with indigestion. Fearing its attacks, I laid in three bottles of soda mint tablets. You don't taste the mint much in a pancake, or even in ash bread, and I didn't have indigestion again until after a dinner in Boston on the way home.

The next morning we sent John down the river to meet Brighteyes, and as he would pass the camp of the other party, we sent some meat down to them as a peace offering, telling them where the carcass was. They had no deer, so we were sure that the six men in their party would make short work of it. They must have been bad-tempered; they wouldn't give John any soda. I don't blame them, I am bad-tempered myself, but I think they should have sent the soda. They might have added some fitting expression of their sentiments.

Never mind, we had the tablets.

Of course it fell to my partner and myself to carry John's pack up the river. It looked like a perfectly normal pack when John carried it, but it wasn't. I carried it and I know. I didn't carry it much more than a mile, but in the last hundred yards of my trip, that pack threw me twice. The last time it got on me and I had to crawl through the straps to get loose. Then my partner took it, and I started up the trail feeling like Atlas off duty. I didn't mean to go farther than a mile, but when I came to, I found that I had probably covered three miles. I sat down and waited. After a while my partner came around a bend in the trail. Three miles straightaway with a fifty-pound pack is more strenuous than it sounds.

"Hitting" the Trail

He was carrying the pack; his face told that. He runs to chin anyway, but when he came down the trail his chin was almost two paces ahead of the rest of him. His expression was pre-occupied, and he certainly needed a bath. He greeted me with the utmost politeness and expressed the hope that I had found the walk beneficial.

After exchanging the compliments of the season, I took the pack and hit the trail. (I didn't mean it just that way when I wrote it, but I did hit the trail, hard, several times.) If there was a tree in the way, the pack and I never seemed to agree; I would go on one side and the pack on the other. I do not doubt that my partner was moved by the kindliest interest when he remarked upon the disagreement between myself and the pack, but I finally had to tell him that his chances for game would be better if he didn't allow the pack and me, or me and the pack—I forgot which now—to engross so much of his attention.

If I were managing things on the trail,

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or for that matter anywhere else, I don't believe I would allow the man who carries the pack to be pestered by the presence of the man who doesn't. It cultivates a taste for murder. Luckily my labors were not prolonged.

The scenery of the portage road lacked variety. The rubble shore was preferable. Every bend in the river might bring game in view. When the road, after a long detour, again approached the river, we were glad to resume our way along its bank.

I had fashioned—somehow I like that expression "fashioned,"—sounds like something I've read—I say, I had fashioned insoles of birch bark for my moccasins, and I felt that fate could not harm me. Where we came out, the river widened considerably, and below and above us were quite a number of flats and islands. Caribou sign everywhere. In several places bear sign, more or less fresh, was found.

We did not wish to get too far ahead of our men. It was patent that unless the river rose, they would have trouble in bringing up the boat. Near the river we stumbled on an Indian wigwam and here we camped. We saw several caribou, but they were in the velvet. For the present there was meat enough, and we used some of our waste meat for bear bait, thinking that we might get a shot on our way down the river.

In the late afternoon Esau and I went up the river about a mile. I saw a caribou on the other side in easy range, but did not shoot. It was difficult to count his points with the glass, and though Esau expressed the belief that the head was a good one, I did not wish to take the risk. (This stag was the first I had seen whose velvet was beginning to strip. Four days later, on the 10th of September, I saw a stag which had lost all the velvet.)

Conditions very seldom permit a satisfactory count of points. A good rule to follow is to observe the number of points on the top of the antler, the brow-points being apparently good. If there are only two points the head will probably not run over from twenty-five to twenty-eight points; if there are three, the total count often reaches thirty-four to thirty-six points; if four, the head is likely to be a very good one, and if more than that, it rises to the exceptional. This statement is not to be taken without qualification. I give it as a rough rule. So taken, I believe it will be found useful.

On this little walk up the river I found more evidence of bear. They are very fond of blueberries. We found most of the berries and most of the bear sign on the east bank of the river.

At night it began to rain, and rained steadily all the next day and night. This was most fortunate, for it enabled our Indians to make better time. Early on the morning of the 8th they came up. During the rain we fished a little and hunted a little, but spent most of our time under our shelter tent. There was little incentive to do anything else.

Problems in Physics

About eleven in the morning we started for Gull River. I took the portage road and the others went along the shore. The road often approached the river. It had not been used for some years and there was a new growth which hid the tangled roots beneath. When a man gets one of his feet caught and lurches forward to save himself, and then gets the other foot caught and so on, it is remarkable how rapidly speed increases,—the square of the distance I should say. This is only an approximation. I had no means of accurate measurement, and my time was limited.

At the end of the road there was a deserted camp. It was the most deserted camp I have ever seen. Usually outworn articles are suffered to remain behind. The former occupants of this camp were of a more frugal turn. Only one thing remained to mark human occupancy, but that—of all blessed possibilities—was a tin of soda! When I left that camp, it was with the step of a conqueror.

The boats were just a little way up the river. I followed for several miles. Then the boats stopped, and the occupants assumed the conventional attitude which indicates the presence of game. The boat was in the middle of the river in open view of the game. Nevertheless

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everybody had their backs humped up and their heads down. This, of course, did not render them invisible. However, it should always be done. It is as conventional and as necessary and as useless as a dress suit.

My partner had gone on ahead to get a nearer look at the stag. The head was not desirable. Soon, he beckoned us to come up.

We were now in a country unknown to our guides. We could have made Gull Brook easily, it was only two miles away, but we didn't know this until the next morning.

It was apparent that Gull Brook was frequented by large numbers of caribou and we concluded to make permanent camp at this point. The weather was warm, so that the protection of the pines was not needed. We made camp in a beautiful grove of unscarred birches. From this point we hunted for about a week.

Probably a Fish

My partner explored Gull Brook. When I came back from a side hunt he gave me a glowing account of a beautiful trout pool he had found, and, in proof, caused John to produce a broiled fish, or a small cinder that tasted fishy. I suppose it was a fish. I ate it and called for more, but there wasn't any more. It wasn't that kind of a pool.

Some people are that way though. It was only one fish. It was a very little fish, but my partner was plainly enjoying the exaltation of the diplomat who has succeeded in negotiations of the most delicate and important character.

The going was bad, he said, very bad indeed, and he said it with so much superiority in his tone that I tried it myself the next day. He was right—the going was bad.

Above the trout pool was a pretty cascade, falls almost. Beyond this there were small barrens on the north side. Here we found a few traces of caribou, but the tracks were all small. Above us, to the southward of the brook, we could see barren areas which were of much greater extent than those to the north. They could wait.

I believe that I am correct in saying that for the September hunting in the Gander River country, the chances for large heads are much better on the river than in the barrens. More deer are to be found in the barrens, but the large stags seem to prefer the rich grass on the river banks and flats. After another day on the barrens, this time more to the southward of Gull Brook, I took up river-hunting and stuck to it.

About the third day in camp, John, whose taciturnity had been somewhat modified by my partner's blandishments, presented us with a loaf of the excellent ash bread. John, Brighteyes, and Esau camped together about forty yards from our shelter tent. Their shelter was contrived of a thin piece of drill which they set up with saplings in the shape of a divided cone, so as to shed the water and hold the heat of the fire. In this they lay, feet to the fire. No blankets, but perfect comfort.

Of course such a shelter was not as well adapted to continuous rainy weather as our silk fly, but it was much smaller and lighter, and would be preferable where much packing was to be done.

At a pinch blankets may be spared from the pack. Where boats or horses are to be used it is foolish to leave out the comforts of the camp. But when a man relies on his back, the absolute necessities sufficiently imperil his soul. At least they do until some days on the trail have hardened his muscles to the unaccustomed strain.

Esau and I took this shelter when we went up the river. The Indians were not at the camp when we started, so this was accomplished without friction. I also took my partner's sleeping bag—it was lighter than mine. The river banks were very rocky and some climbing was necessary. We camped about twelve miles above Gull Brook. We could just as well have gone farther, but there were very few signs of caribou.

By this time I had become a little uncertain as to whether I would equal the heads which my partner had to his credit. We were just about to halt, when on the opposite side of the river we saw some small animals. We had lost our glasses somewhere on the way and we

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could not make them out clearly, so we went up into the woods and skirted the shore for several hundred yards. As we approached the edge to take another look—right across the river—about a hundred and fifty yards away—we saw a lynx, sitting on his haunches on a boulder.

I felt confident that I could hit him, for I had used my .35 for several years. At the report the lynx dropped in a heap, but immediately sprang to its feet and ran, apparently uninjured, some seventy yards to the woods, where it disappeared.

I had fired from a prone position. The gun had been perfectly steady. I had held behind the foreshoulder. I was sure of the accuracy of my rifle and practically sure of the range. But the lynx was gone. I had particularly wanted that lynx. While I was expressing the estimation in which I held my rifle, and adding such other observations as seemed fitting, Esau was wading the river. He went in up to his armpits in one place. He wasn't very far away, so I could easily hear how surprised he was.

Esau never had to grope for language—he always seemed to know just what to say. I was not sorry for his mishap, in fact it diverted and interested me.

He got across after a while, however, and went first to the boulder, looked all around on the ground, then started for the woods. He was gone quite a while, but when he came back he brought the lynx with him.

The bullet had entered several inches above the heart. The wound of exit did not exceed an area of an inch. The resistance was probably not great enough to impart much shock, but, hit in such a place, I don't see how he traveled as far as he did without exhibiting any sign of injury. With larger game this is not an infrequent occurrence, but my lynx did not weigh much over thirty pounds.

The .35 calibre is a very accurate, pleasant-shooting arm. I have never failed to get any game I ever shot at with it, but in only two instances have I sent an animal down in its tracks. Once, several years ago, I dropped a caribou stone dead, and once I broke the back of a moose. The bullet went to pieces in the backbone. In a few cases I have found the bullet nicely mushroomed, but usually the lead leaves the jacket and breaks up, and except where the wound of exit is in the paunch, it is not as large as it would be if the bullet had mushroomed.

It is true my shots were not in the heart. The heart lies too low to risk that shot when the game is at an uncertain distance. My shots are usually somewhat above it. It is only in the books that the heart is always found. This is true of other stories as well as hunting yarns — it applies to fiction generally.

I do not think the gun will be entirely satisfactory for use on dangerous game, such as the grizzly. There I should prefer to use a bigger bore and more lead.

After the inevitable tea, we skinned the lynx—a lean muscular brute he was. His body looked very much like that of a small grayhound. People who know, say that the wild members of the cat tribe are edible; I cannot either affirm or deny it.

Breaking a Bad Habit

When I finally got into the bag I was ready for sleep. I think I said it was my partner's bag. Well,—when I left Glenwood, I designedly left every Turkish cigarette I possessed behind me. I had confided my intention to do this to my partner. I found in his bag a gorgeous pack of ten plethoric beauties of the proper brand. The surprise was agreeable. I sat up in the bag and began. Esau began to snore as I lighted the seventh. I was not sorry the tenth burnt my fingers while I was drifting into sleep. I appreciated my partner's thoughtfulness and thought pleasant things of him.

Next morning I remembered that he did not know I was going to take his bag. Long after we came home I asked him how those cigarettes happened to be in his bag. He said that he brought them, and ten more like them, to prevent me from breaking up the trip by going back to Glenwood after them.

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That lack of confidence pains me even now. He knew I had resolved not to smoke any cigarettes that trip, and he should have known that I would keep my resolution come what might. Also, it was low and unworthy that he concealed the fact that he had more.

When I got back to Gull Brook no one was at the camp, but some fresh liver hanging on a tree told me that my partner had gotten his third head. Just as I reached camp I saw a caribou going up Gull River. He had evidently seen us. I went up beyond the falls in the hope of seeing him again, but without success. On returning I tried the fishing; got four little ones, larger than small sardines but smaller than large sardines.

When I got back to camp the others had arrived, and we set Bonair John to work making a loaf of ash bread. This was the manner of the making:

To about a quart of flour John added a heaping teaspoonful of salt and about two teaspoonfuls of Portage Road Baking Soda—I suppose any other kind of soda would do; after mixing this thoroughly on a wide strip of birch bark, he made a depression in the middle and added water—not much water. Then he began to knead the dough, gradually using from the surrounding flour until it had all been incorporated. The kneading occupied twenty minutes or more and was very thorough. The dough was then covered with flour and placed in hot ashes. After twenty minutes it was removed and the ashes carefully scraped off, and the bread was ready—it was delicious.

At early dawn I started up Gull River. My partner chose the west side of the Gander for his territory. About three miles beyond the falls I came upon a series of long, narrow barrens skirting the river. Recent caribou sign was numerous, but the individuals were all small. I found one immense cast antler, however, counting twenty-six points. Bear sign was plenty. The going was very bad, weather hot and feet sore. Waded the stream coming down to escape the bad going on the banks. The shift was not successful, the rocks were too slippery, and one pool that I remember was too deep. The scorching heat of the sun had not warmed the water a bit, it was villainously cold.

At the falls I tried the trout again, but not with much success.

I had seen that day only one small buck. My partner had been much more fortunate. On the west bank of the Gander, about opposite Gull Brook, a small brook makes a very unostentatious entry into the river. This he followed, taking a general course of about northeast, about five miles; here he came upon the brook pond, some twenty-five acres in extent, surrounded by large barrens. The barrens were exceptionally boggy. He saw two stags, a doe, and a rabbit. This was the only rabbit seen by either of us on the trip. He also saw a little stag running and jumping in an erratic manner. This, September 12th, was possibly the beginning of the season, though we observed no further evidence of it.

Where to Find Them

The next morning we went to the Pond Brook barrens. These barrens lie to the southward of Gull Brook. Pond Brook empties into Gull Brook within fifty yards of Gander River. At its mouth it looks more like a bogan or deadwater. We went up this brook for about one-fourth of a mile, then struck off through the alders on the east bank. After some rather trying travel we reached the barrens. Here again the sign was all small.

We were now entirely convinced of the correctness of Esau's doctrine—that until the beginning of the rut, the large stags remain on the river, the young stags and the does remaining on the barrens. There are, of course, exceptions, but I think that Esau's rule is a good one to remember.

If I was to get a good head it was plain that I must look for it on the river. My partner had his heads and insisted that Esau and I should start down the river that afternoon, agreeing that he would follow with the Indians and the boats the next day.

Just as we were leaving camp, we saw a caribou on an island up the river. The wind was right for the attempt, so Esau

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went up to the farther end of the island, while I took up my position in a comparatively clear place near the center. Everything came out according to schedule. When the stag winded Esau, he turned and came in my direction at a slow trot, often looking behind him. He came within seventy-five yards, offering me a fair shot. He counted twenty-six points, and I wanted a larger one, so I let him go.

We only made about three miles down river that evening when we went into camp.

The next morning it was raining. I had bought a pair of shoes from Brighteyes; they had good thick soles, but no nails. I couldn't keep my footing very well, so I took to the Portage Road. Saw plenty of sign, large bucks, but they all headed where I came from. A bear, however, was going my way and I hoped I would find him later on. I didn't.

About eleven o'clock we came to Rainy Camp. It was still raining very hard. The wigwam invited us, and wet to the skin, we crawled in. A half hour later, curled around the fire, we fell asleep. I awakened only once, my trousers were afire. With the exception of this interruption, nothing disturbed my rest until my partner with the two Indians, all dripping, sought places at the fire.

I do not like spiders, but that wigwam was so full of them that within a half hour I had become acclimated.

I do not like to have smoke blow in my face nor ashes and soot disfigure me, but I had got used to that in the same half hour.

When my partner arrived, I was, I believe, somewhat untidy.

He noticed it. After he noticed it the matter became invested with a morbid interest. His expressions became enthusiastic. When star profanity escaped him, I went down to the river. It was still raining and the water was very cold, but when I came back cleansed, I told my partner that he had a *very* dirty face. When I told him this I hoped he would observe and profit by the chaste form of my criticism and, with shame, contrast it with his rude remarks to me. But if he did, he didn't mention it.

I went up the river several miles that afternoon. The others were to get the hides and heads ready for our homegoing. Saw neither caribou nor any other living thing, and returned to camp dispirited.

My partner's hides and scalps were in an abominable condition. The busy bluebottle fly had worked his will with them. Bonair John remarked that he always thought they would be ruined, but that he wasn't head guide so he was too bashful to mention it. This view of the matter seemed untenable to my partner, who ended the discussion with the declaration that Bonair John was a "d——d old fluddy-duddy." I don't know exactly what is implied in this word, but "fluddy-duddy" seemed somehow to apply.

Darkness and the Dawn

For our sins we slept that night in an abandoned lumber camp, on one of the tables. Sleeping on a board is all very well for the first two or three hours, but after that it isn't. You who have tried it won't try it again, and you who haven't, will try it, but you'll be sorry.

I was feeling glum enough in the morning. This was my last hunting day, no head, and small hopes. I stood on a boulder down by the river—went down there indeed to be by myself.

Down the hill, with his mush pannikin in one hand and a generous hunk of caribou in the other, with a sunny smile on his face, but dark malice in his heart, came my partner.

His quick intuition had divined that I wanted to be alone, so he came. He came and sat on a nearby rock and ate his breakfast aloud. He pretended to commune with himself, but he did that aloud too. He expressed admiration for the scenery, the weather, for everything; in fact he was entirely too happy, aggressively happy.

I walked up the beach to another boulder. He waited a few minutes, then he followed me with mush, meat, and happiness. It was too much.

Esau and I started up the east bank of

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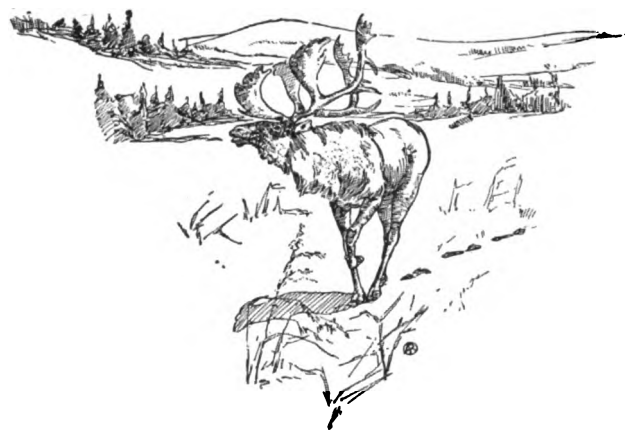
the river. About three miles up we sat down to smoke our pipes. Esau finished before I did and started slowly on. He hadn't gone more than fifty yards when I saw him sink back in the tall grass and motion for me to come on. Before I reached him, I saw the caribou around the edge of some alders. He was moving, and I could not count the points well, but I could see that his head was much better than any I had seen.

In a few minutes more Esau was skinning him. His head was very good. I went back to camp, sent the Indians up with a boat after the carcass, and about one o'clock we started down the river—bound home.

On the way down a doe on the other side of the river saw us and walked along for about a mile abreast of us, regarding us meanwhile with an increasing curiosity. Finally she crossed the river and trotted up to within twenty yards, stopped, and surveyed us with the most sprightly interest; then she leisurely walked into the woods.

Supper and breakfast were of caribou meat—for about two weeks now we've had caribou meat; we never tired of it, and the last meal was as good as the first. We saw but one buck on the trip down the river, and our return was uneventful. We reached Glenwood late Saturday night. Our hunt was over.



TWENTY-FIVE YEARS of BIG LEAGUE BASEBALL is the title of Clark C. Griffith's story of his diamond career beginning in the April OUTING. The first installment deals with Stars of Yesterday and To-day and takes up in a comparative way the great figures in organized baseball that have appeared during the last quarter of a century.

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GETTING GOATS—AND GOATS

By MEREDITH N. STILES

A Tale of Rivalry and a Rocky Mountain Marathon That Ended with a Goat

"INSTINCTS of a hunter!" I said. "Stuff! Your father and grandfather were doctors and your great-grandfather was a printer, and the biggest thing you ever hunted was a cat. You just *happened* to wake up at the right moment, that's all."

"Which is all you know about my ancestry, my jealous friend," retorted Doc, tossing a bit of heather into the camp fire. "Do you happen to recall the moosehead and the deer antlers adorning the walls of my ancestral domicile? Did you think they were bought? No, the same are genuine trophies of the chase, shot by my dad and my granddad up in the Maine woods, and the great granddad, if you please, was originally a trapper up there."

"Degenerate scion of a noble race," I remarked. "Don't tell me that you *smelled* those caribou in your sleep!"

"I tell you I sensed them. Just because I happened to be reared in the effete metropolis is no reason why I haven't inherited a few traits that the urban environment didn't develop, is it? I'll tell you why those caribou woke me up—it was atavism, the recurrence of species, the reversion to type, and it only needed these glorious woods, these grand rugged mountains, this renewed ascendency of the primeval impulses——"

"Whoa, sonny! Whoa! Fine speech, and all that. But that doesn't prove to me that I haven't got perfectly good instincts, too. I had a few ancestral Nimrods of my own; yes, indeed. On father's side they trace us straight back to old Robin Hood and to Diana on mother's"—I winked across the fire to Professor Carstairs—"but that isn't the point. I stayed up till midnight last night helping the professor with his altitude temperatures, whereas you went to bed at sunset. If you had been as sleepy as I was when I went to bed, your atavism wouldn't have atted much so early in the morning, let me state."

Doc sniffed contemptuously and went on with his story. He said that after his "instinct" had awakened him that morning and told him that there were caribou in the vicinity, he had peeked through the tent flap and, sure enough, had seen two of them browsing in the heather not two hundred yards away; that he shook me and whispered "Caribou!" that I only grunted; that after he had loaded his carbine he shook me again and that I said: "Oh, go to the devil and let me sleep"; that he came near kicking the everlasting stuffing out of me for doing it, for when he peeked out again the caribou were gone. My voice scared them away, he said, and he didn't see them again for three hours, when he finally sighted them sunning themselves in a snow patch behind a pile of rocks.

Then he told with what I regarded as a most unnecessary amount of dramatic embellishment how he reached the rocks by crawling over snow on his tummy for half a mile; how, when he rose to fire, he found the caribou had scented him and fled, and then, as if it were one of those little parlor tricks that one does offhand any time, how he had dropped the buck at three hundred yards. The cocky nonchalance of that man was something awful.

Four of us went after the animal the next day—Doc had been able to lug home no more than a forequarter—and I suppose, judging from the tracks in the snow, it must have been three hundred yards, as he said. But I have always

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been suspicious of Doc's efforts to wake me up. I swear I don't remember any such thing. And to have him say that if I had had the slightest instincts of a hunter myself I would have been awakened, too, made me sore. And that's why I am going to tell the rest of this story. He has been boasting ever since we got back about that caribou, but never a word about—but, first let's smear on a few necessary gobs of local color.

We were up in the Canadian Rockies that summer, lay members of a party of scientists who had come to study geology and mountain plant life. Our camping spot was a beautiful bit of mountain meadow with emerald green lakes all around, and towering over us majestic battalions of glacier ribbed peaks whose snowy helmets fairly split the dome of heaven with their mighty altitudes. How's that? Anyway, it was a grand wilderness.

All the Doctor and I wanted was to climb the peaks, explore, fill our lungs with ozone, and hunt, particularly the last. And this we had done from the very first hour in camp most conscientiously, roaming valley and mountainside, day in and day out, with many a "Ss-sst! What's that?" and a prodigious amount of sniffing and snooping around caves and thickets, and many a hot argument as to whether certain tracks in the snow were bear, caribou, goat, marmot, or mountain lion—we, a couple of New York tenderfoots (or is it feet?) who had never shot anything gamier than an English sparrow slungshotwise when we were boys.

In public, that is, among the scientists, there was between us much business of "Hope you get something first, old man," but, of course, each knew what the other really hoped—such is the selfishness that exists even between bosom friends and old college chums. But neither of us scored until the morning, when Doc stole a march on me by sneaking off and getting that caribou.

Well, we cached the meat in a snowbank just back of the camp and dined like kings on it for two long, dreary weeks—that is, dreary for me, for it was immediately voted immoral by the scientists to shoot any more game until the caribou had been eaten. They were willing to recognize the unwritten law of the trapper, the miner, and lumber cruiser that in season or out you could shoot to eat and no questions asked by the game authorities, but frowned severely upon my suggestion that a mountain goat would add variety to our larder. So I gorged myself on the caribou meat and tried to conceal a selfish hope that it would spoil.

Of course it was just my luck within the first day or two as I was clambering up a rock-ribbed peak, just for fun, to meet a goat face to face. I could have almost tweaked his beard. My gun shot up to my shoulder but that's all the shooting it did. Maligning that remaining caribou meat and the scientists, I lowered it, and, noble martyr that I was, choked a sob and watched Mr. Goat skip up a perpendicular cliff and disappear forever, wagging his tail behind him, as it were. I just couldn't climb any more that day.

But at last the Cap'n (the old trapper who bossed the camp for us) announced at campfire one night that the meat would be gone in two days. I suppressed a cheer and indifferently remarked that I would be glad to take a little hike in the morning and see if I couldn't locate that goat I had seen.

"Go ahead," said the Cap'n, "an' good luck. Goat meat ain't as good as caribou, but it air sure better'n bacon."

"Think I'll go along, too, if you don't mind," remarked Doc carelessly.

Well, of course, I wanted to say, "Darn it all, Doc, you've got a caribou; why can't you give me a chance at a goat? Do you want to Roosevelt these hunting grounds?" but, of course, too, I simply had to be magnanimous.

At seven o'clock the next morning, the Doctor and I were off, our rifles under our arms and in our rucksacks one of those delicious mountaineer's lunches of prunes, dry bacon, sweet chocolate, and hardtack. The peak on which we hoped to find my goat we had named "Two Cornice," because over its three-mile broad, perpendicular face there hung, like giant napery, two immense snow cornices. It lay some three or four miles

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to the southeast of our camp, abutting our mountain meadow at right angles. Its furthermost side sloped steeply into another meadow, and this slope was to be our hunting ground.

The Cap'n had said: "Ef yuh want t'shoot mounting goats, git above 'em. When they're scairt, they allus run up th' mounting, never down. Ef yuh see 'em an' kin git above 'em, yuh got 'em, but yuh gotta climb some. The best way is fer one of yuh t'keep as nigh th' top as yuh kin an' t'other one down on the slope, an' ef there *are* any goats, yuh got 'em betwixt yuh."

And so, as we trudged along over the frosty heather to the foot of Two Cornice, I began the silent preparation of a sweet-tempered, but nevertheless unequivocal speech wherewith I proposed soon to inform my dear friend that it was the nether course for his. Doc was silent, and I suspected him. I hesitated. Would Doc say after I had shot the goat: "Well, you had the best chance. You took the upper way?" If I was to beat him to the aforesaid killing, was it not more honor to do it against odds? But, on the other hand, Doc had undoubtedly got that caribou through a base, disloyal trick, and wasn't I entitled to the handicap on the goat if either of us was?

I was. I leave it to any philosopher.

But it was not until we were well up on the shoulder of the peak, negotiating the rocks and snow, that either of us any more than grunted. Then as a starter I began to whistle "Loch Lomond." Doc didn't seem to appreciate the subtle propriety of this selection, and so I sang it with a paraphrase:

"You take the low road and I'll take the high road,
And I'll be in Goatland before you."

Doc was about thirty feet below me, carefully remodelling my footsteps in the snow (his feet were bigger than mine and he really ought to have been in the lead.) I heard him cry "Halt!" I turned and he had his pistol finger pointed at me. "I arrest you as a highway robber!"

"What? Arrest a descendant of Robin Hood? Mercy me! You've got to catch me first, old top," and I began to quicken my pace, if that word can be properly used to describe that put-down-one-and-slip-back-two-hippety-jump movement of a mountain climber in a hurry.

"If you can beat me to the top of this shoulder," I puffed, "the right of way is yours."

I knew I had Doc there, for I was the more agile and lighter, and a thirty-foot start, I figured, made it a sure thing. Up I scrambled and up Doc scrambled, anathematizing me awfully between grunts. I picked out protruding boulders when I could find them, for the snow was deep and sun-softened. It looked easy money until I misjudged one of them, and down into the snow went the whole length of my right leg, leaving my left pointing painfully to about ten minutes of six.

A horrible Indian yell of triumph echoed, and while I floundered, Doc came lumbering by me, a malicious grin on his face as he wafted me the tender hope that I would stick there until I melted out. When I was on both legs again the old reprobate was a good fifty feet above me.

But praises be! Further up I saw a twenty-foot perpendicular. Here was where I would get back lost ground. The original Zouave, me, when it came to wall-scaling. Doc was there, now, rubbering up at it, but suddenly he made to the right and disappeared. He had welched on it apparently and now proposed to circle it and get to the top from the valley side.

It must have been a hunch that made me follow. Here was a chance to prove right then and there who was who in mountain climbing, but something occult, I guess, mesmerized me to pursue Doc's footsteps. At any rate, just as I was rounding the corner where a moment before I had lost him to view, I heard another yell. It was a different kind this time and it made my heart jump. Two leaps and I found myself on the edge of a couloir lined with snow. It dropped away at fully fifty degrees for some five hundred yards into a moraine of rocks. Rolling down it I saw the gyrating body of Doc. He was making

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desperate efforts to stop. He dug in with his heels, with his gun, clawed with his toes and fingers, but on he went, now on his back, now on his stomach. I thought of the rocks and because I was incapable of doing anything else. I screamed like a woman.

But this, of course, is a true story and nothing terrible happened. At the bottom of the couloir there was considerable of a level stretch, and before Doc reached the rocks he simply came to a natural stop. He got up, shook the snow out of his ears, and shouted up to me that I was a blankety blank ass for starting a Marathon race to the top of the mountain.

"Good enough for you," I retorted. "Now you are there, you had better stay there," and, turning my back, dug a step upward in the couloir very, very carefully.

"I'll beat you to it yet, you old pinhead," he hallooed back. "You couldn't hit a goat if he swallowed your gun barrel." Nice, soothing sort of talk that, wasn't it?

Well, that was the last I heard or saw of Doc until—but let's don't get ahead too fast. Let's work this up properly to the grand denouement. I am all pins and needles to get this story out of my system, but of course I realize that certain dramatic requirements must be observed. And I want to show up this atavism of Doc's good and proper.

However, to get to an important point quickly, after I had climbed a while, I saw a goat. Furthermore, there were only eleven others in his or her company, including a few kiddies. I sighted them a mile or so off, directly to my right, twelve white specks against a patch of green heather. I guessed that they were grazing.

At once I realized that it was up to me as a crafty hunter to climb higher and keep along the mountain ridge for a mile and sneak cautiously down upon them. Easily thought of, but when I looked at that long vista of jagged sawtooth rock that multi-pinnacles said ridge, dropping off here and there into dizzy perpendiculars, I paused for another think. Nevertheless I—accent the ego—must give it a try.

A little above me, running around the nearest pinnacle, I saw a narrow ledge. It looked like a path and I took it. To my delight I saw goat tracks on it and, says I: "Where thou goest, oh, goats, I goest." For a while the traveling was surprisingly easy. I negotiated three pinnacles handsomely, but the fourth was different. The path narrowed to a foot and the rock not only dropped sheer below me, but concaved above me. Even then I had the nerve to edge along under the overhang, only to find farther on a five-foot hiatus in the ledge.

My friends, the goats, had at this point evidently jumped. Now, I flatter myself as having been some pumpkins at college as a broad jumper, but I was no fancy tumbler. If I jumped high, I would bump my head on the overhang; if I jumped low, I might miss, and if I did make it, I might lose my balance afterward.

I stood still on that ledge for two long minutes and thought.. It was tragic! First I thought of Doc down there in the valley with probably nothing worse than a little underbrush to bother him. Doubtless he was already in sight of the quarry. Perdition to his lucky star! I *must* jump. And then, conjuring up a gory picture of my battered corpse lying on the rocks down there a hundred feet below, I thought quite some about home and mother and, if I do say it myself, of a certain person with saucy blue eyes and—but never mind about her.

The verdict? *A bas les* goats! Nix on the jump.

And so, an hour later, I was away down in the valley, disgruntled, pessimistic, sore, and all that's synonymous, including hopeless. I felt that I had about as much chance of getting to those goats ahead of Doc as that well-known celluloid dog of catching the asbestos cat in Hades.

When you're up, you're up, and when you're down, you're down. Two hours later I was all of a fever again with hope and excitement and half way back to the top of the mountain. I had seen the goats again. They had moved lower and evidently Doc hadn't reached them —quite evidently. My way up was now along the near slope of a "hog back" that ridged the mountain side vertically. Be-

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yond the farther slope peacefully browsed the herd. I must get above them. After climbing a while, I had to stop to get some breath back and for the first time I took a look below.

Of course! 'Way down in the valley, just emerging from a clump of bushes, I saw Doc. From the speed he was making toward the tail of my "hog back" it was now apparent that he had at last sighted the goats and intended to stalk them from below.

No goat that ever lived had anything on me for mountain climbing thence on. I clambered up like mad to where the "hog back" tapered steeply into a wall-like effect, and there I climbed over cautiously, keeping boulders in front of me. Finally I peeped.

There were my goats all right, but between us slanted sharply a quarter of a mile of heather with nothing to hide behind except, fifty yards perhaps from the grazing herd, a small cluster of low balsam bush. There was my firing line, without a doubt, if I could get to it unseen by the goats and before Doc could get in any of his fine Italian shooting.

I looked for him below. Yes, there he was again, dodging, back bent, behind a school of boulders big enough to hide an elephant. And he would be within range, too, mighty quick. I squelched, right here, at least audibly, a string of some of the choicest asterisks ever substituted, did some rapid calculating, dropped flat on my back, and with my rucksack under my neck as a pillow, began to glissade, feet first, down the sloping heather. There was just enough of the night's heavy frost left to make it slippery.

I slid ten yards, dug in my heels and stopped. The goats were still peaceful, but Doc had made another boulder. Ten yards more—another boulder for Doc. No touchdown for Harvard at this rate, I plainly saw, and on the next down I made twenty yards—goats quietly browsing on the sidelines, but now no Doc in sight. On the next slide I grounded on a sharp rock and left in my wake the principal part of my pants and some of the underlying anatomy. My next was a grand slide for life. I got going, couldn't stop, and made forty yards before a fortuitous hillock saved me from becoming a human catapult.

I looked again for Doc, peeping down the top of my cheek as I rested. Asterisks and exclamation points galore, please, a whole font of them! There, behind one of those boulders, not fifty yards from that still surprisingly innocent herd, crouched the lucky boy. With my throat lumpy with envy, I watched him wriggle around the corner of the boulder, poke his carbine out, and take aim. It was a dead easy shot at a beautiful old patriarch who was sweeping the heather with his snowy beard, contentedly grazing, all oblivious.

But Doc didn't fire! He drew back suddenly behind the rock and disappeared! *What* did I know about that? I was completely feazed, but did I stop to reason why? I had about three hundred yards more to the balsam bushes and in less than as many seconds I had made it. In another instant I had a bead on the poor old patriarch. Crack! He went down and I stood up. The other goats turned and stared at me, the first specimen of the genus homo, probably, they had ever seen. It was not until I started toward them that they decided that there was anything reprehensible about me. Then they turned again and galloped away, circling toward the mountain top.

The old patriarch lay dead in the heather, a bullet behind his ear. Striking the pose of a victorious Roman gladiator, I stood over the carcass and directed a haughty stare toward the boulder where I had last seen Doc. He was a long time coming, but when he did, it was on the dead run.

"I heard a shot!" he yelled. "Did you hit one?"

I pointed nonchalantly.

"I saw 'em," said Doc, "but I couldn't get here in time. How did——"

"What?" cried I. "Say that over again. You couldn't get here in time?"

Doc gave me a somewhat startled look at that.

"Well—er—ah——"

"Doc, I saw you take aim behind that rock. Why didn't you fire? Lose your nerve?"

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And this was Doc's answer:

"Now please, old man, don't rub it in too hard. I pulled the trigger, but the hammer just clicked. The fact is—er—my gun wasn't loaded and I left all my cartridges in camp."

"Instincts of a hunter? Bah!" I said. "Atavism? Piffle!" I said. "Rub it in? Well, I just merely want to remark that I hope the shade of your great granddad is nowhere in the vicinity if you expect to sleep soundly to-night."

There! It's all out and I've made my last will and testament. I wouldn't have told it, only, as I've hinted before, Doc still thinks because he got that caribou and I only a goat, that as a sportsman, he's the ace and I'm the deuce. It's no more than human, is it, to want to trim him down?

SPRING IN THE NORTH

SPRING, so enthusiastically welcomed in the lower countries, is the most disagreeable time of the year in the northland. To the trapper, prospector, or woodsman far from a railroad or post, it means a month's imprisonment with no means of reaching the "outside." To the man in the town who wishes to go "in," it means a season of waiting. Each must wait, as patiently as he can, until the ice goes out.

For the ice goes out as it forms, first in the small streams and little lakes, last in the big, deep stretches of water. Mid-April generally sees the shallow, muskeg ponds open. Sometimes it is the end of May or the first of June before the ice is gone in the big, deep lakes. Travel is impossible except by the slow, weary toil of sledge, portage, and canoe, combined.

All winter the ice trail has been high and dry, frozen solidly, and, on the lakes, swept clean of snow by the wind. There is no softening until April comes with its longer days. Then the traveler who makes a new trail across the lakes finds several inches of water between the ice and snow.

After the middle of April, in an ordinary year, the sun melts the ice along the shore. The great mass at last breaks loose and comes up through the water that has covered it and floats high and dry. For possibly a week travel is as good as could be wished. The ice is dry and good enough to afford good footing. The sun soon slashes the surface until it is like a piece of cut glass, however, and it is impossible for dogs to travel upon it without cutting their feet.

But this lasts only a short time. The warmer sun continues to melt the ice near shore, and, while the main body floats solidly, two feet thick, there is no way to get on it. Ten to thirty feet of water intervene between ice and shore. Then the imprisonment begins, and there is no release until the ice disappears.

Slowly, invisibly, the melting goes on. The lakes are covered as they have been for months. Toward the end of April or first of May the first signs of the actual breaking up occur, long fissures with gradually widening lanes of water between the mile-wide cakes. Much depends upon the wind. Generally a gale from the south or west gets a foothold in some open bay or narrows. Then, in a few hours, the lake is opened. The next day not a pound of ice is to be seen. Canoe time has come again.

But what is generally known as spring has hardly arrived. There are snow storms in May, the nights are very cold, and canoeing is far from being a pastime. The ground is brown, bare, desolate. Only the pines are green. May is nearly gone before the first green shoots appear, before the leaves begin to bud. June has arrived before the fresh greenness long past in the lower countries comes to alders, willows, birches, and poplars. Leaves and buds must await the sap, and the sap cannot flow until the frost is out of the ground. Even in June there may be snow. There is always a frost. It is then that one can see something besides humor in the saying that there are only two seasons in the northland—Fourth of July and winter.

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A FIJIAN FIELD DAY

By LEWIS R. FREEMAN

How Three Caucasians Battled Valiantly in the South Pacific for the Glory of Their Race

IT has been well said that a man's early love of outdoor sport is kept alive by the boy side of him, the part that never grows up, and it is probably because the man of all of the dark-skinned races has even more boyishness in his nature than has he of the Caucasian, that the Malay, the Polynesian, the African and the Indian of both the East and the West have taken so enthusiastically to the white man's games of strength and skill. One hears the educated East Indians confess to a deeper debt of gratitude to Great Britain for the cricket, soccer, and hockey she has given them than for conservation and famine-relief, and it is a matter of common knowledge that baseball is the one thing that the Porto Rican and the Filipino have accepted without question from the United States.

When the black or the brown race adopting one of the white man's games is wholly or partly civilized, development of the sport along its mental as well as its physical side often takes place, so that a proficiency may be obtained by the pupil rivaling that of the master. This has been shown in India, where the best cricket eleven in the Empire is that from a Mohammedan college in the Punjab, or in the Straits Settlements, where one of the best football teams is composed of Malays, or in the Philippines, where native baseball nines have repeatedly won from the best aggregations that the American Army or Navy could send against them.

When the people taking up a sport is only in an advanced stage of barbarism the development of the game is confined to its physical side, with the consequent absence of "head-work" limiting the proficiency attained, while if it is a race still lower down in the social scale that essays to "break into sport," the resultant game is usually an amusing hybrid composed of about equal parts of football, baseball, or cricket, as the case may be, and tribal songs and dances. One of the best illustrations of the latter is the so-called Samoan cricket—now called "baseball" in the American island of Pago Pago—in which every man of one village plays against every man of another, teams often numbering several score players each, and games occasionally lasting for ten days or a fortnight.

The native of Fiji, though less than a generation removed from active cannibalism, would probably be socially catalogued as in an "advanced stage of barbarism." The missionary was undoubtedly the principal factor in inducing him to give up head-hunting and cannibalism, but—because he had to have some outlet for his bubbling spirits which the somber man in black did not have the key to—the sport-loving young Briton with his outdoor games has been the principal factor in keeping him from returning to his old ways. Thanks to the efforts of enlightened British officials and certain of the more progressive chiefs, sport has become an established institution throughout this rich and populous group.

About Suva, the capital, which is situated on the big island of Vita Levu, the coaching and example of numerous enthusiastic young planters and officials awakened the interest of the natives in football, cricket, and field sports within a few years from the time Great Britain became suzerain in the group, while the custom of sending the sons of prominent headmen to school in Australia developed some native athletes of real ability.

Pride in the achievements of these lat-

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ter, as well as the Fijian's inherent love of any kind of activity in which he can swing a club, butt with his woolly head, or make a show of his speed, strength, or endurance—all natural survivals of his raiding days—quickly won the hearts of the natives and brought them solidly into line as devotees of outdoor sport. The Fijian, like his brother Polynesians, never would and never will take kindly to regular work, and it was a fortunate thing in those early days when he was being weaned from cannibalism to be able to exhaust his surplus energies by putting a cricket bat in his hand in place of a war club, and to set him chasing balls instead of heads.

Fiji Coming On

As a result of many years of coaching Fijian athletics, while not yet of an especially high standard, are still a good deal less primitive than in any of the other South Pacific groups, and it is nearly always possible for the visitor to any of the islands to indulge in a more or less excellent adaptation of his favorite sport. Cricket, football, boxing, running, swimming and various other trials of strength and speed have been enjoyed in competition with the natives by foreign visitors to this and that village for many years, but I doubt very much if, in all the athletic annals of Fiji, any strangers have had the fortune to engage in such a comprehensive carnival of sports as fell to the lot of two spirited young Britishers and myself on the occasion of our chance meeting in picturesque and historic old Mbau the winter before last.

A guest on the yacht of my friend, H. H. Sinclair, I had been enjoying a cruise of a number of months among the islands of the South Pacific, and because Suva, with its hotels, club, newspaper, and other civilized institutions, promised, in spite of its open-hearted hospitality, little of interest in the way of native life, I accepted the more eagerly an invitation from the Roku Kandavu Levu to spend a week at Mbau, his home and the capital of old Fiji.

The trip from Suva to Mbau by launch, horseback, and canoe is a somewhat arduous one, but well worth the trouble, nevertheless, as this little island is one of the quaintest and most interesting spots in the South Pacific. It was here that the great King Thakambau, who ceded the group to the British Empire, made his headquarters, and the beautiful village still contains many evidences of its former greatness. Thakambau's great war-canoe, a huge double dugout over a hundred feet in length, its shattered sides carefully protected from the ravages of the elements by a regularly renewed shed of palm leaves, is still religiously preserved on the leeward beach.

It is this canoe which history records was, whenever possible, launched over live human bodies as rollers, one division of the king's army being kept continually on the foray to provide the wherewithal. The body of the famous cannibal king, who died in 1883 after enjoying an annual pension of fifteen hundred pounds for a decade or more, rests under a tall shaft of marble on the top of a hill in the center of the little island and, not unfittingly, in the shade of the Wesleyan mission church.

The Roku Kandavu Levu, a most attractive young man whom I was destined to see more of later in Suva, left on a journey up the River Rewa on the evening of my arrival, but not, however, before telling the Mbuli or headman to give me the "freedom of the city," and turning me over to a couple of young Englishmen, who had been his guests for a fortnight, with instructions to make my stay a pleasant one. I could not have fallen into better hands. The Honorable Bertie W——, who I have since learned has only one invalid brother between himself and a baronetcy, had been sent to the Antipodes by his noble father because he had allowed the charms of a young lady in the Gaiety chorus to interfere with his pursuit of knowledge at Cambridge. A month of good behavior in Sydney was being rewarded by a tour of the Fijis, on which was officiating as cicerone young Mr. Tom B—— the son of a prominent official of Suva and a lad after the Honorable Bertie's own joyous heart.

These two spirited youngsters—both

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were under twenty—had started out from Suva to study native life "at first hand" in the wilds of the interior of Vita Levu, but the Roku Kandavu, who could not let the chance for practice with two clever young cricketers go by—he had himself been the best bat on the University of Sydney eleven a few years previously—contrived to make his capital so pleasant for them that they had lost interest in the savages of the mountain country and settled down to pursue their investigations at Mbau.

Everybody, it appeared, had been pleased with the arrangement but the missionary, who, because a large part of his congregation had stayed away from service to watch the Honorable Bertie illustrating the principles of Ranjitsinji's "leg glance" for the benefit of the Roku on the village green, had closed up the church and posted a notice in Fijian on the door that it would not be reopened until the Sabbath-breakers had left the island. The Roku who, as a result of his Australian education, is a fairly open-minded cynic himself, still hardly felt it desirable politically, as the ranking chief in Fiji, to stir up unnecessary trouble with the all-powerful missionaries. Accordingly, torn between the exigencies of hospitality and his duty as the chief of a Christianized people, the perturbed descendant of Thakambau, dodging responsibility in flight, had departed on an "urgent" mission up the river, telling his guests to continue their "studies" as long as they desired, and leaving word for the villagers not to let their love of sport interfere with their religious duties. It was at the beginning of this "interregnum" that I arrived.

The natives of Mbau, probably on account of the patronage extended by their distinguished chief, have the reputation of being keener on outdoor sports than those of any other part of Fiji, and it was this circumstance which inspired my young friends with the idea of holding a field day in which the white race should compete with the brown. The honor of the Caucasian was to be upheld by Bertie, Tom, and myself, while that of the Polynesian would be maintained by a selection from all of the Fijians on the island. The natives accepted the challenge eagerly, although the team with which we were finally confronted was not made up entirely of residents of Mbau, nor even of Polynesians. That, however, transpired later.

Most of the first day was spent arranging the program. The natives wanted a tug-of-war, but our captain—Bertie—realizing that we lacked the "beef" for such a contest, agreed to its inclusion only in the event that the missionary—with whom South Sea life had agreed so well that he weighed in the vicinity of 250 pounds—could be induced to pull with us for the honor of his race. Needless to say, the event was not scheduled.

We did the sporting thing, however, by offering to oppose an eleven made up of the island's best cricketers with a "team" composed of Bertie, Tom and myself. The other events decided upon were two swimming races, two sprints, two canoe races, shotput, throwing the cricket ball, broad and high jumps, a "modified Marathon" and three boxing contests.

The Three-Man "Team"

The second day we spent in practice and "elimination trials" to decide which particular events each of us was best fitted to compete in, as, except for the cricket and one canoe race, the finals were to be strictly "man-to-man" affairs. Luckily, our respective abilities dovetailed perfectly. Tom was an adept at swimming and no novice in handling the outrigger canoe, while his splendid endurance made him a natural if inexperienced distance runner; Bertie had given promise of developing into one of the fastest amateur sprinters in England before the Gaiety girl supervened, and had recently bested some of the speediest men in Australia at the "hundred" and "two-twenty."

My experience in my old varsity events, the shotput and broad jump, and the remnants of a fair throwing arm, made me our logical representative in the remaining contests we had scheduled. Each of us was slated to box in his respective class—Bertie in the lightweight, Tom in the middleweight, and I—"because I weighed a good fourteen stone

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and looked jolly fit," as my team mates put it—in the heavyweight.

The elimination trials of the Fijians, on account of the wealth of candidates, were more complicated. They were astir before sunrise, and fought and wrangled from morn till dewy eve and on into the moonlight in an earnest endeavor to pick the likeliest representatives to uphold the honor of their race. The final list was not handed to Bertie till near midnight, and even then, as became apparent next day, was not quite complete.

Every soul on the island except the immediate members of the missionary's household was on the beach in the morning when the canoe races were started, and what with beaten war drums and coal-oil cans raised a pandemonium that would have made a varsity "rooting" section appear like a Quaker meeting when their man splashed across the line an easy winner in the one-paddle event. Tom made a good fight, but his opponent had too many generations of training behind him.

Won by a Wreck

The "open" canoe race was one of the events which our opponents had forced upon us, and in it Bertie, Tom, and I were to paddle against any hand-propelled craft that the Fijians could put in the water. It was their original idea to launch the old hundred-foot double outrigger of the great Thakambau—the same that it was customary to push down the beach over human rollers in the good old days—man it with fifty paddlers and swamp all opposition in the backwash. When the Mbuli vetoed the use of that sacred relic for so frivolous a purpose, they cheerfully compromised on the absent Roko Kandavu's state barge, which had thwarts for twenty paddlers. This was ready on the morning of the meet, but after the Fijians had seen the effort required on the part of Bertie and myself even to keep balanced in our sliver-like outrigger, they did the sporting thing by entering a high-sterned old head-hunting canoe with but a quartette of paddlers.

The odds were still a hundred to one against us, or rather they would have been had our confident opponents picked anything better than a dugout that had been rotting and cracking in the rains and suns of the last thirty years. As it was the change cost them the race, for though they got away at a gait that carried them out of sight around a point while we were still serpentining in the vicinity of the starting line, the speed and the flailing paddles put the old canoe under too much of a strain, and it disintegrated and sank before half the circuit of the little island had been made. Under Tom's careful coaching, Bertie and I rounded into form sufficiently to allow the three of us to nurse our reeling outrigger over the course and across the finish line, where we arrived just in time to see our bedraggled opponents being "drummed out of town" by the oil-can brigade.

In the high-jump we were weak, and Bertie who had never essayed the event before, was no match for a slender Fijian youth who had been to school in Auckland. A few minutes later, however, he evened up things by sprinting the length of the village green a good twenty feet ahead of his dusky opponent, and my victory in the broad-jump put us in the lead for the first time.

Tom, who was really a marvel at the Australian "crawl," had his revenge in swimming for his defeat in the outrigger contest, beating his man almost two to one in a dash of about a hundred yards across a bight in the seawall. The vanquished Fijian, who had also been picked to swim in the race of a half mile or more to the mainland and back, was so crushed by the completeness of his defeat that he refused to compete again, the event being called off.

In the shot-putting contest we used an old rust-eaten twenty-pound cannonball which had been thrown into Mbau away back in the 40's by a British gunboat on a punitive expedition against the natives for killing and eating a family of missionaries. My opponent made up in strength what he lacked in "form," and by dint of following the missile out of the "ring" threw it to a distance which I was able to beat only by resorting to the same unorthodox expedient. Bertie added to our score by romp-

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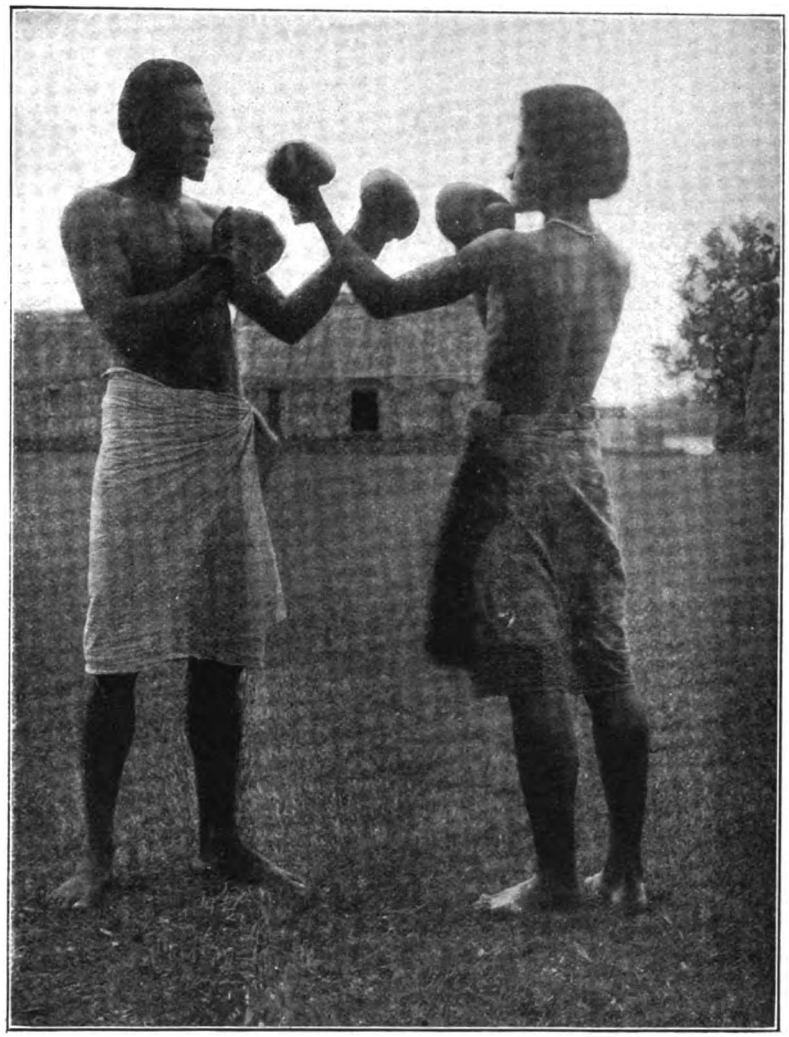

ONE OF THE FIJIAN "ELIMINATION" BOUTS

ing to another easy victory in the sprint around an approximate 220-yard circle which had been marked with cocoanuts along the outside of the village green.

The last event of the forenoon was the "Modified Marathon," to be run over a course once around the island, across the causeway to the mainland and back, and then around the island again to a finish in front of the council-house, a distance of about three miles. We had counted on Tom to win this event handily—the Fijian, as a rule, runs to strength rather than speed—but the natives sprang a "ringer" on us by entering one Moti Lal, the lanky East Indian coolie employed by the Roku to hoe his taro patch and carry messages between Mbau and Rewa.

This human greyhound sprang away at the report of the "pistol"— in this instance a blow on a hollow-log war-drum—and had loped around the island and half way to the mainland before poor Tom, winded already, staggered out by Thakambau's old outrigger on the leeward beach. Here Bertie and I headed him off and took him out of the race to save his strength for the trials of the afternoon. The natives,

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THE YOUTH WHO WON THE HIGH JUMP

who appeared to figure the importance of a race in direct proportion to its length, beat their hollow-log drums and sang chesty, sonorous war chants all through the rest hour in celebration of this victory.

While Bertie was winning the first event of the afternoon, the cricket-ball throwing contest—a competition in which he substituted for me who had originally qualified for it—I essayed to give the Fijians an exhibition of hammer-throwing, with the technique of which they were still unfamiliar. In the absence of a regulation hammer, a network of fiber was woven around the twenty-pound cannon-ball we had used in the shotput, and into this mesh the end of a three-foot strand of cocoa-husk rope was fixed. This contrivance looked decidedly flimsy, and, as transpired presently, did not belie its appearance. It held together for a couple of tentative tosses, and even through the preliminary swings of a real throw; but when I whirled into the first circle of what was to have been a triple turn the fibrous mesh gave way and, while I did a double back somersault, the ponderous old missile went hurtling through the air and banged against the side of the great council-house.

MOTI LAL, THE LANKY EAST INDIAN WHOM THE FIJIANS ENTERED FOR THE "MARATHON"

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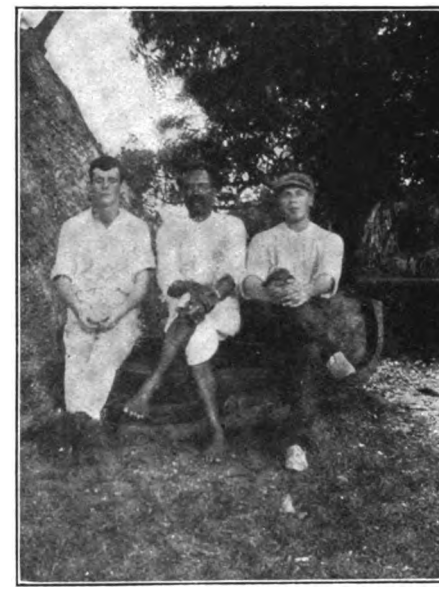
The stout woven wall was not breached, but a muffled crash told of havoc among the tribal relics which adorned the interior. A few minutes later the Mbuli, who with several of the elders of the village had hurried to investigate, emerged with a baleful look on his face to announce that the great *yangoona* bowl, out of the sacred depths of which *kava* had been served even to the royal Thakambau himself, was split across the middle from the jar received when it struck the floor.

The Fijians appeared rather awed at the magnitude of the catastrophe, but the unquenchable Bertie, after placing his "field" for the cricket match, called out to the Mbuli to ask if it did not seem like old times to have the walls of Mbau battered down with cannon-balls.

The one-inning cricket game was a Caucasian walk-over. The dazzling work of Tom and Bertie, who alternated between bowling and wicket-keeping, finished man after man with a "goose-egg," and, in spite of the inexperienced "field"—myself, whose "cricket" had all been learned in base-ball—retired the bewildered Fijians with less than two score of runs. This total that versatile pair, batting in partnership, exceeded in a quarter of an hour.



FROM LEFT TO RIGHT—TOM, THE MBULI OF MBAU AND THE HONORABLE BERTIE

Acknowledging that they were outclassed in cricket, the Fijians now demanded that a game of soccer football should be played upon the same terms —a full team of them to the three of us—and to this proposal the game Bertie, displaying better sportsmanship than judgment, consented. Of course, after a severe buffeting which left us all rather groggy and winded for the boxing contests, we were overwhelmingly defeated.

By scoring a point to the victor in each event — the only way which would have been practicable under the circumstances — we had a lead of four wins at this juncture. This would have given us the "racial championship," even were all three of the boxing contests to be lost by us. The Fijians, however, contending that the winning of the Marathon

"EH!" THE FIJIAN CRICKET UMPIRE'S DECISION IS QUESTIONED

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was the equal of several ordinary events, insisted that they were at least on even terms with us. Again our complaisant captain, pulling on his gloves for the first bout—the lightweight—waived the point and agreed to let the three boxing contests decide the day. Five seconds later, guarding carelessly in backing away from a clinch, Bertie left a wide opening, driving into which with a well-timed short-arm jolt, his stocky opponent landed on the point of the lad's chin and stretched him limp—a clean knock-out—on the turf of the village green.

Tom, who boxed almost as well as he swam, rushed his man—the shifty Auckland-educated youth who had defeated the Honorable Bertie in the high-jump—from the beat of the war-drum which was doing service as a gong, and had him so groggy at the end of a couple of minutes that the bewildered fellow started to slug one of his own fuzzy-headed seconds. He was led off to escape further useless punishment, leaving the issue of the "racial championship" up to the heavyweight bout, with me as the "White Hope."

THE FIJIAN WICKET KEEPER WAITING FOR A THROWN BALL IN THE CRICKET GAME

The ponderous-limbed Goliath, whom the Fijians led out like a blue-ribbon bull at a stock-show at this juncture, had been kept out of sight all day, evidently through fear of awakening a protest on our parts. He was one mass of hair and rolling muscles from head to

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THE FIJIANS ASSEMBLING FOR THE BOXING BOUTS

heel, and needed only a knotted war-club to complete the illusion of having stepped out of the Stone Age upon the green of Mbau.

"Just such a cannibal as old Thakambau must have kept for a Lord High Executioner," I told myself, and shuddered at the unpleasant thought.

Of course, I knew that he could not box; but it was also equally plain that nothing less than a charge of dynamite would have any effect upon his iron-ribbed frame. I stood regarding him with dismay as Tom—they were still fanning the prostrate Bertie with a taro leaf—began to tie on my gloves.

"They've put up a game on us," he said quietly, trying to knead the padding away from over the knuckles of my left hand. "That chap's a hard nut, and they've brought him over from Rewa just because Bertie was telling them last night that you were the champion of America. It's a dirty trick, but it'll only start a row if we try to call the turn. Go ahead as if nothing was wrong, but be sure not to try any in-fighting. Then we'll at least get a draw out of it. I'll tell you about him later. Now don't forget. *Keep clear!*"

"THE STARTER." THE "PISTOL" WAS AN OLD FIJIAN WAR-DRUM

It was with that sound injunction well in mind that I stepped out to where the glowering gorilla was waiting in the middle of the circle.

For a few seconds we stood staring stupidly at each other, and then, because I was

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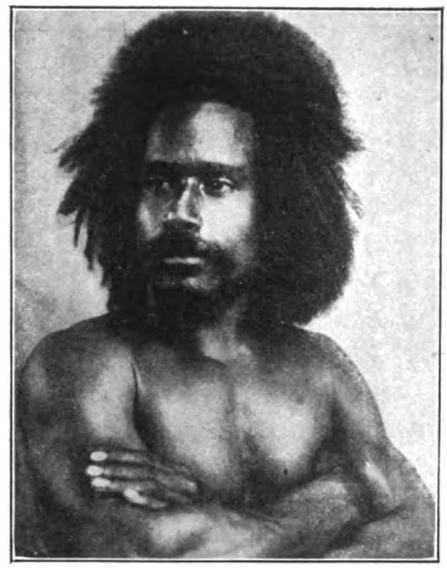
too nervous to remain quiet, I began dancing round my stolid opponent. He followed me with his head, owl-fashion, not moving his huge, flat feet until I was almost behind him.

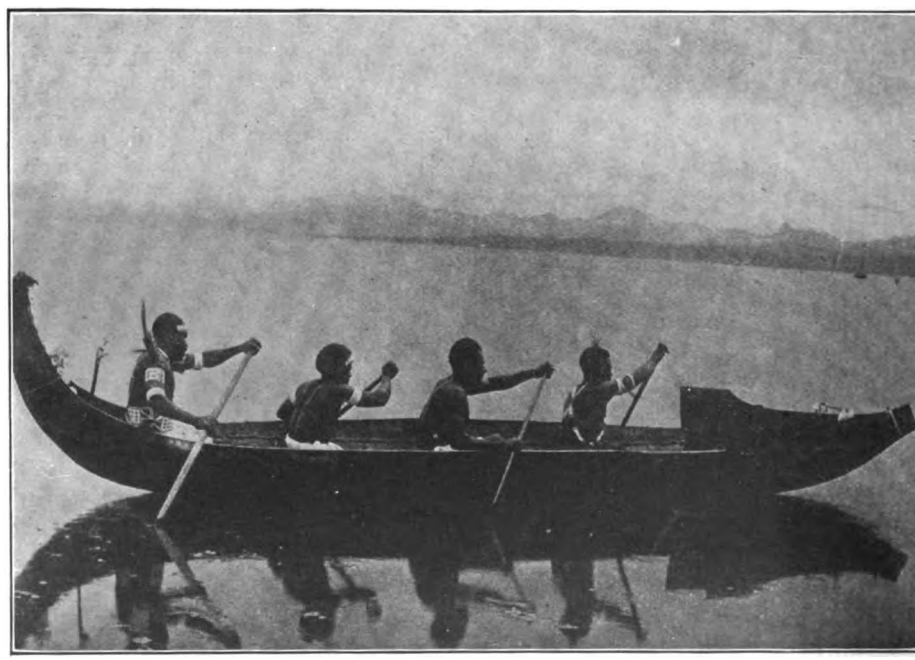
"He's slower even than I thought," I told myself, and began feeling better.

After prancing in a couple of circles without making my burly antagonist do more than mark time to keep me in eye-sweep, I plucked up courage and, stepping in quickly, drove a tentative left for the great prognathous jaw. Without the flicker of an eye-lash, he bent the fluted pillar of his neck and took the blow in the depths of his mat of woolly hair. Hardly did he seem to need to brace himself, so completely was the force of the punch taken up in this natural shock-absorber.



THE STRONGEST MAN IN FIJI, WHO WON THE DECIDING EVENT AT THE INTER-RACIAL FIELD DAY

To sharp hooks in the ribs and upper abdomen he replied in the same passive way, ducking the massive head whether I led for the face or not. With a chest like the bulge of a steam boiler and three inches of corrugated iron muscles armoring his solar plexus, there was no need of guarding anything but the face, and this he did by the simple expedient of putting out his foot-deep



THE FIJIAN ENTRY IN THE OPEN CANOE RACE WAS AN ANCIENT HIGH STERNED CRAFT THAT HAD DONE SERVICE IN THEIR HEAD-HUNTING DAYS

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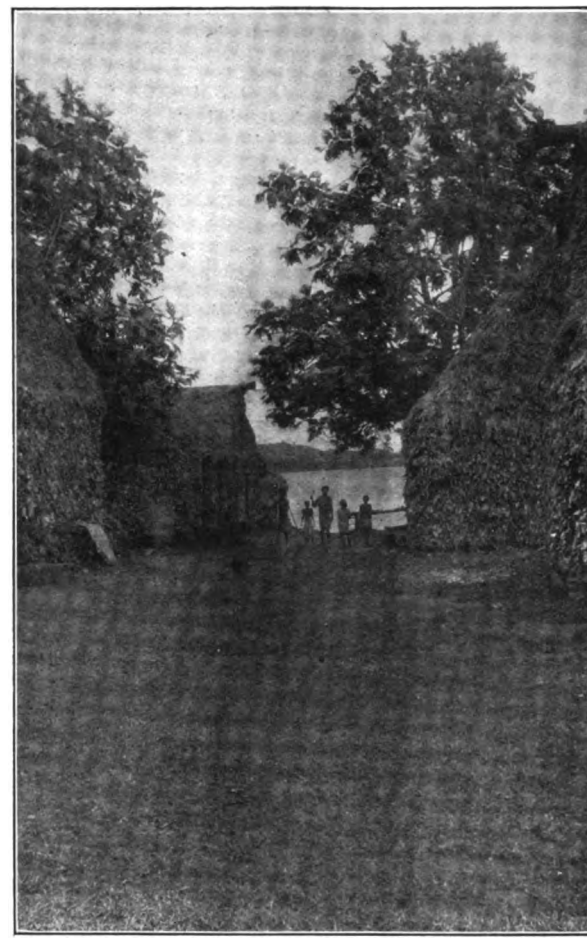
shock of matted hair every time I made a feint in that direction.

"The dolt is no more than a human punching-bag," I told myself; "but even a punching-bag will break down if hammered long enough," forthwith beginning to try the effect of persistent hammering. Scored as a sparring contest, I would have won the decision by a hundred points to nil, for the stolid monster seemed perfectly content to let me circle round him and hit almost when and where I pleased. But we were fighting under Fijian rules, which hold that a contest undivided by rounds shall continue until one of the parties is unwilling, or unable, to go on. Now and then when I would whip a stiff jolt in under the fringe of his mop to the side of his neck he would wince a bit, but most of the time he simply stood with bowed head and set muscles and let me pound away.



ONE OF THE GRASS-PAVED STREETS OF MBAU

It may be that my blows lacked steam after my long day of unwonted exertion under the tropical sun, or it may be that the hulking frame, with its armor of knotted muscles, was damage-proof as long as the jaw was protected. At any rate, one thing was certain—the only effect of my frenzied hammering was to tire myself without discomfiting, or even, apparently, annoying my burly opponent in the least.

"Take it easy till sunset and we'll call it off for a draw," muttered Tom behind me as I stepped back to get my breath after beating a sounding tattoo of right and left hooks in a vain effort to jar the solar plexus of the "Cave Man."

It was sound advice and I should probably have followed it had not the Honorable Bertie—he had been brought to a few minutes previously and was just awakening to an interest in his surroundings—cut in with "Don't quit! Step in close and upper-cut straight up for his face. Remember you're the 'White Hope.'"

There certainly did seem room to slip one up between the dome of the swelling chest and the fringes of the hair-mop that would do some damage, provided one only went in close enough, and without stopping to ponder the possible consequences, I stepped forward and drove a hard right upper-cut, just as Bertie had suggested. Smash! My glove landed squarely in the middle of "Cave Man's" face, straightening him up with a jerk and offering the very opening for the jaw that I had awaited ever since the bout started.

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I was just getting under way a left hook of which I entertained high hopes, when, closely following the roar of pain and rage which signalized the landing of my right, something swift and terrible as a Bolt of Wrath came hurtling against my own jaw, an explosion like the Crack of Doom rang in my ears, and I came to some hours later to find a sedate-looking Fijian lady in somber black—the Mbuli's wife—massaging my bruised face with one hand and holding a Bible from which she was reading in the other. An austere-faced white woman, whom I seemed to recognize as the missionary's wife, was renewing a turtle-steak poultice upon one of the Honorable Bertie's rainbow-colored optics, while a Fijian in a long coat and black *sulu* was kneading out the cramp-knotted muscles in Tom's overworked calves. The three of us were in the little mission hospital.

"The Reverend B—— and his wife have been working over you since sundown," said Bertie thickly, through a bandage. "In fact, they've been very kind to all of us in the matter of lending 'first aid.' We've apologized for stirring up all this jolly rumpus here, and Tom and I have promised to leave with you for Suva as soon as you are able to travel. It may comfort you a bit, old chap, to know that the Reverend B—— has just gone over to set the nose of your late opponent. Perhaps you don't remember that you penetrated his front hair and landed a tap just before he hit you."

"Oh, he hit me, did he?" I said with a sigh of comprehension, sinking back upon the pillows. "I thought some one had been practising with the twenty-pound hammer again."

The last thing I recall before sinking off to sleep was the sound of singing and beaten war-drums welling up from the village green. "The Fijians celebrate the triumph of the Polynesian over the Caucasian," explained Tom, between the groans wrung from him by the bunching muscles, in answer to my look of inquiry. "That chant is one they used to sing on returning from a successful foray laden with many heads of enemies. They seem to trace some similarity between the spirit at least of the two occasions."

On the way back to Suva Tom told me about the "Cave Man." "The chap is probably the strongest man in Fiji," he said, "and as stupid as he is powerful. Several years ago one of the Australian overseers at the Rewa sugar plantation took him in hand and taught him that trick of protecting his face by turning down his hair-mop, and since then he has stood up against the champion heavyweight of every warship that has come to Suva without being knocked out. Several of the more careless ones have fared quite as badly as you did, and one of them, who chanced to floor him with a lucky poke, he later got hold of, threw down, and started to chew to pieces. That broken nose you gave him was the worst damage he ever received, and he would probably have started a cannibal feast off your limp anatomy if the Mbuli and the rest of us hadn't crowded him off."

In GETTING READY FOR THE TROUT
Stillman Taylor gives some sensible advice for those who are looking forward to wetting a line on the first of April or thereabouts, in the April OUTING.

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DUCKS THROUGH THE GRASS

IN CANADA'S GREATEST GAME REGION

By HERBERT K. JOB
State Ornithologist of Connecticut

PHOTOGRAPHS

Water Fowl, Upland Birds, and Big Game in Profusion Around Lake Winnipegosis

AFTER spending the entire summer in a wild region of northwest Canada, on the very frontier of civilization, in a wonderful game country, not yet spoiled but on the verge of going the way of all the world, I am minded to attempt a verbal picture of the region, its animal and human life, and the general conditions there as typical of a vast area of game country and wildfowl breeding-ground being opened up. The region which I shall describe is the country bordering Lake Winnipegosis, a large body of water well to the north in the Province of Manitoba.

The average person has little conception of the extent of the northern wilderness. Even some maps, particularly those of railroads, seem designed to disguise the truth. The average map of North America would hardly more than indicate the existence of Lake Winnipegosis, much less suggest that it is quite a considerable affair. When I first looked it up, I surmised that it could readily be explored in a canoe. But when, at length, I gazed over its blue expanse and saw the surf, driven by the fresh northwest wind from a clear sweep of over one hundred miles, preconceived notions were rapidly amended.

The branch of the railway ends at

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A CREE INDIAN'S HOME

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TERNS ON POINT OF ISLAND

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Winnipegosis, a typical frontier town, at present of about five hundred inhabitants. It has a number of stores and is the trading center of the sparsely inhabited region. Out beyond, up the lake, is practically a virgin wilderness, with hardly any white settlers, a few half-breeds, and widely scattered small Indian reserves. Another line of railway, further west, has reached the Saskatchewan River country at Le Pas, north of the head of this lake, and is being pushed rapidly northeast to Fort Churchill on the west shore of Hudson's Bay. For some years to come, however, Winnipegosis will remain the point of approach for a large area of wilderness.

The region is one of poplar forest, with extensive marshes bordering the big lake and the streams and chains of smaller lakes connecting with it. Though the forest is extensive, it is distinctively a wet country, and there is a great deal of marsh and swamp suitable for the breeding of wildfowl. What impresses one at first is the absolute loneliness of the country. One leaves the railroad and town and is at once cut off from mankind. In the power boat we skirt the lonely shores for scores of miles, gaze at marsh and poplar forest with clumps of pointed spruce projecting here and there, watch pairs or small flocks of ducks flying off, but see no signs of human life. We have suddenly passed beyond the pale of civilization. Back from the lake the country is unsurveyed and practically untraversed. We saw the first surveying party at work.

HALF-BREED SINGEING DUCKS FOR DINNER

Settlers are pouring into the southern part of northwest Canada and taking up land for agricultural purposes. This northern forest country is a different story, a land, not of farming, but of hunting, fishing, trapping. We located with a French-Canadian family on the lake shore, fifteen miles from the nearest whites. A half-breed family were the nearest neighbors, four miles across an arm of the lake, and there were no others short of an Indian reservation a dozen miles farther.

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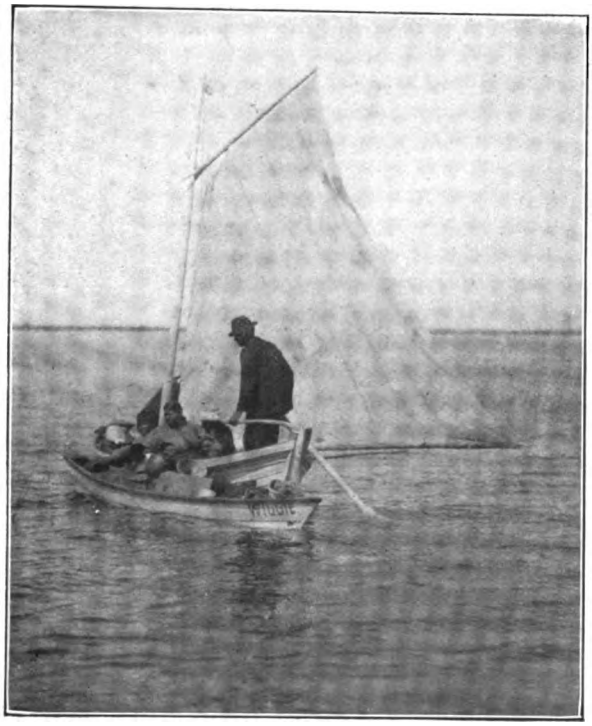
The experience of taking up land and living in this region is well illustrated by the case of the family with whom our expedition found quarters for the summer. For some years they had been there alone in the wilderness. The women yearned for civilization, but the men appeared quite contented with their lot. Here is about the routine for the year. Summer is their most leisurely period. They raise a little garden stuff, under difficulties, and breed a few cattle. In late summer they cut hay in the boundless meadows along the lake and put up stacks of it for the cattle in winter. The middle of August sees the beginning of the fishery, the great and profitable white-fish industry, which affords excellent pay to those who are not afraid of hard work, exposure, and danger. This lasts well into the winter.

THE BELLE OF THE CREES



THE INDIANS SAIL AWAY

Snow falls as early as September, and not later than the middle of October winter supplies must be laid in. Early in November the lake freezes over, and for a month or so, while the ice is getting firm, the inhabitants are out of communication with the world. Then, when necessary, they can make trips to town over the ice by horse or with dogs and sledge. Trapping starts in, and a skilled trapper can make good pay. Moose hunts come by way of variety. The cutting of fuel is no inconsiderable item of labor. Spring brings another long period of isolation, without mail when the ice is unsafe, and thus the short summer comes round again.

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AFTER YOUNG DUCKS IN THE SHALLOWS NEAR SHORE

TYPICAL WILD DUCK SCENE ON MARSH

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INDIAN BOYS LEARN THE ART OF SAILING EARLY

With all due respect to the prairie region as a breeding ground for wildfowl, the forest country is by no means to be despised. While it is true that ducks do not breed in the dense forest, and large areas are impossible for ducks, there are vast numbers of lakes scattered through the north country, with considerable amount of marsh, meadow, or muskeg adjoining. While ducks did not actually swarm on these breeding-grounds, I found them pretty well distributed, though in scattered pairs, and the number in the aggregate is large, especially when augmented by the young broods.

By the last of July the early broods, particularly of mallard and pintail, are

AN INDIAN FAMILY

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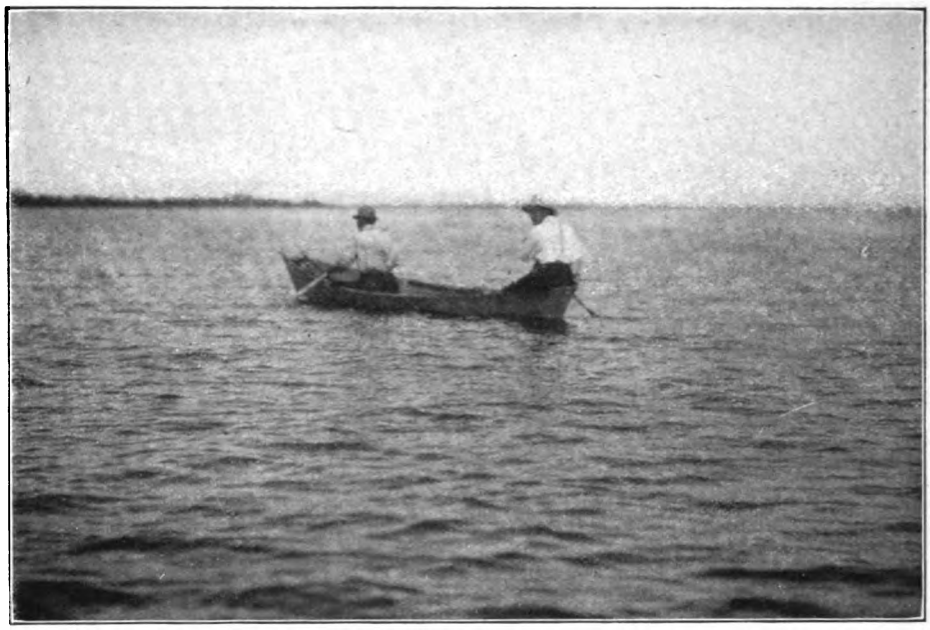

HALF-BREEDS CHASING YOUNG CANVAS-BACKS

THE CHIEF OF THE CREE INDIAN TRIBE; SAID TO BE EIGHTY-FOUR YEARS OLD

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able to fly, and forthwith they begin to flock. Instead of small bunches, one suddenly begins to see ducks in scores and even hundreds. The deep-diving varieties are slower in feathering, and some are late breeders. Of these, the canvasbacks hardly fly before September, the redheads later in that month. The scaups or bluebills hatch about the middle of July, and the scoters even later, so they could hardly be on wing before October.

At first the young ducks are quite tame and are easy to approach in the marshy pools, under cover of the tall growth. The ducks of the canvasback type do not resort much to the small pools, after the breeding season, but prefer the great areas of cane and rush growing from deep water, and also flock out in the open lake. By October the migration is in full tide, and the lakes and marshes are fairly alive with ducks and geese. In the arm of the lake, where we had our camp beds of wild celery grow; and in late fall the lake is said to be fairly black with fowl.

Where do these all come from? Such numbers are not locally bred. The breeding area may not be as enormous as has been supposed, but there must be a great deal of suitable marsh, in the aggregate, bordering thousands of lakes, and sometimes in large areas, as the muskeg country around Hudson's Bay. Moreover, I do not consider that the present breeding-grounds are taxed to their full capacity. Each year the increase has been shot down beyond the point where the various species can hold their own, so that even on rich breeding-grounds the number breeding seems sparse. I do not doubt that around Lake Winnipegosis alone scores of thousands more ducks could be raised if there were the stock to do it.

Over this region in suitable localities the shore-bird tribe are quite abundant in the migrations, and a few species breed in moderate numbers. Last summer I saw more yellow-legs than I ever observed in the east, even thirty or more years ago. Turnstones and plover flock along the shores and in the pools. Grassbirds or pectoral sandpipers and other species of their tribe were numerous. Wilson's or jack snipe breed on the marshes. By August the young were flying, and we kept flushing them.

When it comes to upland game, I have never seen the partridge or ruffed grouse anything like as abundant. Tramping in the woods in early summer I encountered young broods every few minutes. During late July and August, when they were well grown, they came out of the woods to our camp in droves, running around the yard, going into the sheds for grain, perching on the woodpile or the water barrel. In the little poplar grove close by they would fly up at our approach and sit on the limbs, letting us walk close beneath them. Looking down on us, they jerked their tails, ruffled their feathers, and reiterated their "quit, quit" like turkeys. It seemed as though they were beseeching to be put into the pot.

Upland Birds

Of the prairie chicken, or sharp-tailed grouse, I frequently saw coveys running around the yard in the potato patch, and frequently flushed them from the brush and grass patches back of the marshes bordering the forest. Though these are numerous, there are more of the ruffed grouse. In winter the ptarmigan migrates down from the north, and they have "white partridges" to eat.

The great wild forest has its big game. Winter brings caribou, in some localities, and roving bands of great gray timber wolves. Of the latter I saw skins which must have been seven feet long. The black-tailed deer, locally called "jumping deer," is a permanent and common resident. The same is true of the lordly moose. Moose is the prime game of the region, the main source of meat supply of the wilderness dwellers, year in and year out. When they do not have it fresh they use it smoked and dried.

The region is certainly a wonderful moose country. Hardly had I entered the poplar forest the first time when I saw a pile of moose droppings, which I found almost everywhere. The forest seemed like one great barnyard. I picked

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up a nice cast-off antler only a few minutes' walk from camp. Nevertheless I did not actually catch a glimpse of a moose all summer. Foliage and mosquitoes readily account for that. They are exceedingly wary, and even the Indians have hard work to find them at this season.

I was much interested in the ways of the Indians and half-breeds as related to the moose. Your regular Indian will not work as long as he can get a bite to eat, the half-breed being a shade or two less lazy. Happiness consists in having a tent, a few blankets and pots, a little bag each of tea, sugar, flour, and tobacco, and, if possible, a chunk of bacon. For fresh meat he shoots ducks or partridge, and now and then a deer or moose. These people are wonderfully keen at finding signs or trails and deciphering their age and meaning. In the back part of the marsh bordering the forest they find recorded the latest news, which they read as easily as we do a newspaper. When they discover a fresh trail they follow it persistently for a couple of days, sleeping on the trail wherever night overtakes them. The moose usually proceeds to windward. After feeding enough, it will turn and swerve out to one side, maybe a hundred yards, and then, after proceeding back parallel to the trail some distance, it lies down to rest, facing down trail. It may hear the hunters passing on the trail, or scent them when they have gone beyond to windward, in which case it will make off.

When the Indians, therefore, read by the signs that the moose is close, they quarter zig-zag across the trail to some distance on either side, in absolute silence, watching for the moose. In winter it is much easier to go quietly and to see ahead. In this way they sometimes come upon the moose lying down or standing in the bushes, in which case it is probably all up with his majesty.

A period of plenty now ensues with the Indians or half-breeds. They gorge themselves with moose meat for the next week. Often they will bring a good hunk to the settler's lone ranch and swap it off for a sack of potatoes, which makes a pleasing variation in diet for both parties. While the meat lasts the Indian is rich. He does no more work till it is gone, when the sting of poverty again drives him forth. Even the half-breeds live mainly from hand to mouth. When they have no moose, they depend chiefly on shooting ducks, which are abundant from April to November, with partridge and prairie-chicken the year round. At one time when marooned across the lake I made my way to a half-breed's shack to get something to eat. All they had on hand was some old bread dried hard, which I managed to eat by soaking in some half-sour milk.

Dogs a Necessity

One possession very essential to the settler in the wilderness along the big lake is a pack of dogs for sledging on the ice in winter. They also serve to defend the property from thieving Indians who wander around now and then. These aborigines, voyaging along the lakes in their canoes or small sailboats, like to camp by the landing-pier and beg what they can. It is not policy to forbid them access to the premises. Without the dogs they would prowl around by night and steal. The dogs, tied up by day, are released at night. An Indian could hardly approach the house after dark without being set upon by the pack.

These dogs are powerful wolfish brutes, fierce and treacherous. Those on our premises, with one exception, a bitch with a pup, never made friends with us all summer. The owners ruled them by means of a long, loaded rawhide whip, which could be snapped with a report like a pistol. On one occasion a member of our party undertook to separate two dogs which were fighting. The two turned upon him, and at once the others joined in the attack. In a moment they had torn his clothing and bitten him, and they would have soon killed him had not the hired man rushed to his rescue with the big lash.

Every other night a net was set in the lake. This was drawn in the morning, and a bushel or so of fish taken out, which served both for man and dogs, being fed to the dogs raw. The catch

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consisted of pickerel, white-fish, suckers, perch, and other species, and we had delicious fresh fish all summer.

Promptly on the 15th of August begins the annual commercial fishery. The white-fish in particular is especially valuable, and the fishery is very profitable. I was told that an expert fisherman sometimes makes $40 a day. Practically every settler and half-breed along the lake, as well as some Indians, work at this through the fall and into the winter till the ice gets very thick. It is done entirely with nets. While the lake is open the trading company sends out a steamer which rounds up the different fisheries and buys up the catch, which is put on ice and shipped off by rail fresh in cold storage. Such quantities of fish were caught in these nets that, even with the sparse population, the supply of fish in the lake was running low. The government came to the rescue and has established a fish hatchery out on one of the islands, which seems to the visitor strangely out of place in such a wilderness.

The best fishing seems to be at the north end of the lake. Various camps are established there, to which men proceed for the fall fishing with sailing craft or motorboat. The fishermen have hard times of it, as these northern lakes are very rough and tempestuous, big waves arising very suddenly when the wind breezes up. They are liable to get caught out and to be in considerable danger.

One day when hunting across the lakes I came upon an Indian woman standing upon the shore, crying. Her son and his family had just left in a sailboat for the fishery over a hundred miles north up the lake. "My Johnny go fishing up the lake," she explained brokenly, with a wave of her hand indicating where he had gone. "He stay all fall, far away. Big wind, he blow, blow. My Johnny he get drowned, maybe." It was a pathetic touch of human nature.

Before the lake freezes, stakes are driven where the nets are to be placed, and ropes run from one to the other, making a sort of trolley. Holes in the ice are kept open and the nets are hauled down and pulled along under the ice. When the net is hauled the cold is so severe that it freezes immediately when it encounters the air. What frightfully cold work it must be hauling those nets and the fish with the mercury below zero! The dog sledges are the ideal conveyance for running from hole to hole, and for carrying apparatus or taking the fish ashore. It is too cold for horses to stand around, but the dogs do not mind it at all. When it comes to taking the fish to town, the horses can be used, but the dogs are faster and can drag surprising loads on a fast run.

The Real Business of Life

With the coming of cold weather, when the wild animals have their winter fur, the trapping industry begins. It is a great industry, too, for thousands of dollars worth of fur are still shipped out of that country. Muskrat, mink, and skunk are the most numerous, with some fox and otter. By general consent the man first on the ground preëmpts a certain considerable area, and sometimes fairly covers it with traps. Where we stayed they had small steel traps by the hundreds hanging from the rafters of a shed. Most of these men become very expert in setting traps and have an intimate knowledge of the habits of the animals, in so far as they bear upon the problem of trapping.

It surely is no "snap" to keep in running order a number of lines of traps in severe weather and get results. The business, though, in the hands of keen and vigorous men is very profitable, and a season will net a man hundreds of dollars. Between fishing and trapping, the settler or half-breed can afford to take things quite easily during the summer—provided he can only let liquor alone, which, unfortunately, few of them seem able to do.

The problem of the destruction of game by settlers, half-breeds, and Indians is an important one. That the game laws are very little observed in the regions of semi-wilderness goes without saying. The few scattered inhabitants live off the land, and it can hardly be otherwise. It would take an army of game guardians, one to every shack or

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Indian reserve, to prevent illicit killing of game. The Indians do not stay on their reserves, but roam around all summer in their canoes, camping and killing. The lone settler must live and is bound to take some game, but he might do it more economically.

Rather than have the present good laws a dead letter, it might be recognized in some guarded way that, in case of necessity, residents in specified areas might take game at any season for their own use. Instructive circulars could be issued by the chief game guardian, distributed, posted in public places, and published in newspapers, explaining the importance to the settler of having game, its general rapid decrease, and urge, for the settler's own good, certain economies such as the following:

Exercise self-denial in shooting wildfowl on their way north in the spring, taking as few as possible. When the ducks and geese have settled down to breed, refrain from shooting at least till the eggs are laid, and then shoot only drakes, as these do not help rear the young. Never shoot a mother duck with a brood. Do not shoot any chicken or partridge in the spring or until the young are big enough to take care of themselves, certainly not before the latter part of July. Spare the female moose and deer and take bucks in preference. Try to enlist the coöperation of Indian chiefs, agents, and storekeepers on reservations, and teachers where there are schools, and have the Indians shown how a little care will make the game last them much longer, and how some Indian tribes have almost no game at all. Where any Indians can read their own language, placards might be gotten up for these reservations.

The entrance of a railroad into a new country, of course, is bound to be a menace to the game. Still there are some things which should be stopped. Though the lone settlers may need game at various times, some effective organization might be made to prevent summer shooting excursions from railroad towns. Prominent business men and reputable citizens should respect themselves enough to obey the game laws and coöperate with the game guardians. In this region it was the regular thing to expect Sunday excursions up the lake from the railroad terminus to slaughter the game.

The following may serve to illustrate. One party had quite an affair. They took out a caterer, shot over fifty ducks, and had them served à la mode. Another party attempted the same plan, but they were so drunk that, though they shot off 450 shells, they damaged only three ducks.

The game guardians of the province are excellent and worthy men, earnest in their work. I had some delightful conferences with Charles Barber, chief game guardian, and enjoyed visits in camp from his deputies. It is a big problem to enforce law or secure evidence in such sparsely settled regions. The coming of an officer is known, and everyone is on guard when he arrives. As soon as he leaves they do as they please. After all, the main hope is in educating public sentiment to realize that it is for the good of the Province to conserve the supply of game. The lone settler needs it, many men want to hunt, and it is an asset to the Province to attract well-to-do men who will come to hunt and spend money liberally.

Appreciation of this will cause the best elements to frown upon gross abuses and make them more ready to report violations, which they will feel are against the public interest. It will be good for all concerned when the United States and Canada can make treaty to coöperate in protecting the wildfowl both on their breeding grounds in Canada and our northern States and during their flight south. This will help bring to bear a body of public sentiment and interest in protection and give mutual encouragement in the enforcement of the laws.

The new sport of AQUAPLANING is described in the April OUTING. It resembles a combination of Aeroplaning, tight-rope walking, and bronco busting.

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THE FOUNDATIONS OF DOG BREEDING

By WILLIAMS HAYNES

What Kennel Men Can Learn From a Study of the Results of Scientific Experiments

IN the midst of much popular interest in all phases of the problems of breeding, dog breeders, somewhat curiously, have given but the scantiest attention to the theoretical and practical work being done by trained biologists, the agricultural stations, and careful breeders of various kinds of stock. This is strange, for with certain limitations the knowledge gained in a painstaking study of the sugar content of beets will be valuable to all breeders, not only of plants but also of animals. Experiments in breeding mice and poultry have yielded results that are being practically applied by many horse and cattle breeders. Notwithstanding these good examples, dog fanciers have refused "to take the tips"—to borrow a phrase from the paddock—that fellow breeders and scientific investigators can give them.

This can, however, be reasonably explained. Dog breeding is a sport pure and simple, and as such it is very largely removed from any immediate economic influence. Scientific workers have devoted themselves to problems of more direct, practical value than the breeding of a dog to win championship points or a derby stakes. They have lent their aid in producing the 200-egg hen, in increasing the weight of cattle and of hogs, in raising the percentage of butter fat in milk. The breeders of economically important stock make breeding their business, and they have the sharp goad of gold to prod them to greater efforts. Their own stock has been the subject of scientific experiment. They have little difficulty in translating into dollars and cents the results of these experiments.

To-day many cattle, horse, sheep, hog, and poultry breeders are alive to the valuable helps that science can give them. Dog breeders have fallen hopelessly behind. A book on breeding that is as plain as A B C to a progressive dairyman will be full of terms that are new and unintelligible to the dog fancier. Every once in a while one meets a dog breeder who passes among local fanciers as a scientific breeder. Usually his "science" consists of copies of Darwin's "Origin of Species" and "Animals and Plants under Domestication," some hazy notions about atavism, telegony, and Mendelian inheritance, combined with a remarkably good knowledge of the points, history, and pedigrees of his breed. It may be stretching the truth to call such a man a scientific breeder, but he is surely making some serious effort along the right way. Most fanciers, it is to be feared, do even less than this.

In this day and generation and after all the work that has been done in the study of genetics, it is an outrage that a prominent dog owner should confess that "put two good ones together and trust to luck" is his idea of successful dog breeding. Nevertheless, I am told by one of his friends that this is the acknowledged "system" of the owner of a certain large kennel. His kennel is filled with the best dogs that money can buy; every modern device that can help good care and good health has been installed in their buildings; an expert kennelman is in direct charge of the dogs—but is anyone surprised to learn that these kennels have never produced a home-bred

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champion? When we hear such expressions and when we see such wasted opportunities, it quite justifies Mr. Muss-Arnolt's forceful statement that "ninety per cent of the so-called dog breeding is nothing more nor less than canine prostitution."

Dog fanciers have made a serious mistake in not grasping for their own benefit the important knowledge that has been accumulated in other fields by scientists and breeders. "The principles of scientific breeding" is a pretty good term to put a dog fancier to rout. Before he runs away, however, let him remember that only a few years ago "all these durned high-falutin' notions" were scouted by the very farmer who to-day boasts of the blood lines of his cattle and the egg records of his poultry yards.

Let him also recall the years that his breed of dogs has been bred and the number of thoroughbred puppies that are whelped each year. Further, let him remember that dogs, excepting field dogs, are bred solely for size, shape, and color, all variations of form, without any regard for the more elusive functional variations of weight, fertility, composition of flesh, and contents and quantity of the milk secretions which are all so vital in the breeding of live stock.

Easy for the Dog Breeder

Compared with other breeders, the dog fancier has an easy time of it. In the first place he has less to breed for. Secondly, dog history and dog pedigrees have been for generations carefully recorded. Lastly, dogs have been bred toward approximately the same ideal for a considerable time—much of the commercial stock and poultry being comparatively recently manufactured varieties, comparable with the Boston Terrier and the Airedale. But are dogs nearer to the ideal or do they breed closer to type than other domesticated animals?

A good understanding of the principles that have helped other breeders will help the dog breeder. Certainly, they will give him a big handicap over any rival who breeds on the "trust to luck" system. Of course, these principles are not infallible rules, else we should long ago have been able to reduce all breeding to a series of mathematical formulæ that would produce champions at will. Just because we must work with such very uncertain tools, it is all the more important that we should learn all we possibly can and from every possible source.

Often dog fanciers mistake the true object of dog breeding. "The longest way round is the shortest way home," but many rush in frantically with the wild hope of breeding a champion in their very first litter. Once in a while this succeeds, but most of the dismal failures are to be accounted for by this hasty, short-cut method. If instead of trying to get a chance winner, the dog breeder would set seriously to work to build up a strain of his own by gradually improving the quality of his stock, he would stand just about one hundred per cent better chance of accomplishing lasting results.

Every breeder should have a knowledge of the principles that underlie all successful breeding, and no breeder can be successful unless he be patient and persevering. Equally important in his equipment is a thorough knowledge of the breed. He must know the standard that describes the ideal type; he must be able to apply this ideal to the actual dog without having it distorted by the individual application. In other words, he must have in his mind's eye a very definite conception of what sort of a dog he wants to produce, nor should he be easily changed from his ideal. A heavy burden is laid on the breeder's shoulders by every change of type.

The judges are largely responsible for these changes. The incompetent all-rounder, with his imperfect knowledge especially of the finer points of many of the breeds he so boldly essays to judge, is the worst offender. There is, however, little doubt that, if the standards of the different breeds were expressed in more exact language and more liberally illustrated with weights and measures, much confusion would be avoided. Everyone knows that a person's fingers should meet when clasped round his own wrist, and that both hands should be able to encircle the neck. Each penny scale on every railroad platform in the

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country tells you what you should weigh according to what your height may be.

Similar figures can be worked out for different varieties of dogs and embodied in the Standards. One example will suffice: "Back not long" is a quotation from one of the present Standards. "Length, back of skull to root of tail, 22½ inches" carefully specified for a dog, with 21 inches specified for a bitch. This is also a quotation, taken from the official description of the Skye Terrier Club, drawn up by Mr. Duncan Cunningham. There is no material for debate on the comparative clearness of these two definitions.

In addition to knowing the points of his variety, a successful breeder must know as much as possible about its past history. There are two phases of canine histories. The one treats of events; the other of dogs. The former is interesting; the latter is invaluable.

It is a standing joke that the origin of all breeds of dogs is shrouded in mystery; but almost always we know something of the conditions that called new breeds into existence and of the uses to which they were originally put. In many cases, we have some pretty reliable information about the materials employed in the "manufacture" of certain varieties. A knowledge of these things is useful. Some idea of the work that was expected of the ancestors of our terriers gives one a wonderful insight into the true meaning of the why and wherefores of a wire jacket. To know that the Otterhound was a factor in the creation of the Airedale explains where this popular dog got his exceptional nose, his big size, and also his tendency to unattractive ears.

Interesting and suggestive as this part of a breed's history is, it is not nearly so essential to a successful breeder as a sound working knowledge of the good and bad points of the different individual dogs of the past. Without this knowledge a breeder cannot do any real breeding; he will only be mating dogs. No landlubber at sea in an open boat without sail or rudder could be more completely helpless. James Watson in his work "The Dog Book," a book, by the way, that should be in every fancier's library, gives a vivid illustration of the real meaning of a pedigree. He says:

"We have already said that pedigree is valuable, and it is an essential in the case of purchasing for breeding, but we again repeat that, if the buyer does not know something regarding the dogs in the pedigree, either personally or from reliable information, one string of names is as good as another to him. Here is a case in point as shown in the following Irish terrier pedigree:

- Sire: King's Masterpiece
  - King
    - Kaiser
      - Red Idol
      - Kriffel
    - Kindle
      - Ch. Breda Mixer
      - Red Inez
  - Killarney Lily
    - Balmoral Bill
      - Breda Dan
      - Balmoral Fan
    - Saintfield Midge
      - Red Idol
      - Shankhill Violet
- Dam: Koerchion
  - Kaiser, 1100C
    - Red Idol
      - Red Ire
      - Breda Iris
    - Kriffel
      - Ch. Breda Mixer
      - Knoxonia
  - Kindle
    - Ch. Breda Mixer
      - The Irish Ambassador
      - Breda Vixen
    - Red Inez
      - Ch. Bachelor
      - Breda Florence

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"According to the United States Government test, the Irish terrier that owns that pedigree is practically a mongrel, because in two generations it has but one ancestor with a stud-book number. . . . The seeker for champions in the pedigree discards it because he only finds Breda Mixer and Bachelor, and they are too far back. Now we will put it before the man who knows:

" 'I see a Knox bred one. Knox has done quite a bit of good breeding in his time and they seem to come better right along, but that is to be expected, of course, if the man knows his business; and inbred, too, and in the fashionable way. Did you ever notice how many good ones are by a son of a dog that gets good ones out of a daughter? . . . In this case you have a son of King bred to a sister of King.

" 'Why, man, you have a wonderful pedigree here. I have never seen anything like it before: full of Breda Muddler blood, or what made him, and not once is he mentioned. Here you have King's sire, Kaiser out of Kriffel, by Breda Mixer, who got Muddler; and Kaiser's sire, Red Idol, was out of Breda Iris, the dam of Muddler. The King's dam, Kindle, is a full brother in blood to Muddler, for Red Inez was a sister, if not a litter sister, to Breda Iris.'

"All this is repeated below in the pedigree of Koerchion, King's sister. Do you know how Kriffel's dam, Knoxonia, was bred? No; well, she was a Knox anyway, and we can take her as all right. King's Masterpiece is a half-brother of our Celtic Badger, I see, for his dam is Killarney Lily. I met a man the other day who had lately been at Belfast, and he told me of his visiting Mr. Knox and spoke of his dogs very favorably. He likes King very much; and I remember his saying that it was little wonder that Badger and this Masterpiece, which he saw, were good ones, for Killarney Lily was one much above the average. From the way he spoke, she must be a very nice one.

"If I remember rightly you won a couple of times with this bitch, but she did not strike as one who would go on much further than she then was. I know, however, that if I owned her nothing would induce me to part with her until I had tried her as a brood bitch. If she does not prove a good one, then there is no value in a pedigree."

Formerly dog breeders relied almost exclusively upon what might be called individual selection. They picked out their best bitches and bred them to their best dogs. In the light of modern knowledge, they followed the "trust-to-luck" theory more than they ever would have acknowledged, for they rather prided themselves in their quaint, old-fashioned way on their skill and care as breeders. Most dog fanciers to-day are following right in their footsteps, practising individual selection, with possibly some efforts to breed out faults by counterbalancing, or mating a bitch to a dog whose strongest points offset her own peculiar weaknesses.

The Importance of Ancestors

All this is directly in the face of the fact that the ancestors more remote than the immediate parents are being continually shown to be highly important. This places more and more emphasis on the value of a real understanding of a pedigree, which means a real knowledge of the dogs. One of the chief advantages of the foundation of a strain of your own will be the very intimate knowledge that you must of necessity have of the individuals behind your breeding stock. The breeder who knows the most about the points of the dogs of the past will be best able to foretell the quality of the puppies of the future.

An example will make even clearer the very great practical value of a knowledge of the real meaning of a pedigree. A certain strain of Airedales has produced a great number of winners, but it inherits from its founder a tendency to light, round eyes and heavy ears. That these defects are buried in the blood is proved not by the shining examples of perfection in these points that this strain has produced, but by the fact that the majority of dogs bred in this strain are more or less "off" in eyes and ears. To be specific, a certain dog of this strain is being extensively used at stud to-day. As an individual he is good in ears and

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his eye escapes comment except from the hypercritical judge. Without knowing his family tendency to poor eyes and ears, no one would expect his get to be bad in these points. Nevertheless, a breeder would be bitterly disappointed should he use him to improve these points, and many of his puppies are downright faulty in these respects.

To sum up the requirements for a successful breeder and the equipment that he must have: He must, first of all, be a true dog lover and a patient man blessed with that spirit that comes up smiling after many disappointments. These things are inborn in the man himself, and no amount of study can provide him with these necessary characteristics.

A good, sound working knowledge of his breed, however, may be acquired by visits to shows, trials, and kennels, by talks with experienced fanciers, judges, and breeders, by reading historical articles in the kennel papers and by study of the monographs that various authorities have written on different breeds.

The third requirement for success as a dog-breeder is a knowledge of the principles that underlie modern scientific breeding. We have seen that, as a class, dog-owners are behind other stock breeders in their application of these scientific helps to practical problems. If a dog-owner is a breeder at heart, if he has a good knowledge of his breed and of the principles of breeding, he can make a kennel that will become world-famous. Others have done so. The Duchess of Newcastle laid the foundation of her justly celebrated kennels by the purchase of two Fox Terrier bitches, Eber Post, a wire, and Partney Prude, a smooth, for which she paid just ten pounds, fifty dollars. Ask any Terrier-man about Ch. Collarbone of Notts, or Ch. Cackler of Notts, or Ch. Collar of Notts, or Ch. Corker of Notts, or about that litter of nine, all first prize winners and two of them champions. All these terriers were bred by this lady from her own strain.

As a matter of fact, the modest fancier usually has a distinct advantage over the larger kennels. Without a fat purse he is forced, in this day of high-priced prize winners, to breed his own good ones. Necessity was ever the mother of invention, and the Stud Books, both in England and this country, show that there have been more champions bred in the "kitchen kennel" than in the wealthy fancier's "show place."

The American dog fancy needs careful, serious breeders. For years we have been importing dogs from England. Far too often it has been a case of the last dog over shall be first in the award list. In several breeds we have bred dogs as good as England's best cracks, but in many varieties the retort of a professional at a recent show is true enough to have a sharp sting to it. Two dogs were on the block before the judge, and the handler of one waved the stars and stripes by saying of his entry, "He's an American-bred, sir." The other dog's handler replied, "Yes, and he looks it."

Will a dog-fancier be repaid for the time, and the trouble, and the expense, and the work, and the disappointments of breeding? If he is a successful breeder, he most surely will. Financially, because a good dog always commands a good price, and a kennel with the reputation for turning out good dogs will be a Mecca to which bench show and field trial devotees will always flock. Less substantial than dollars and cents, but hardly less satisfying to a true breeder are the personal satisfaction of having accomplished something difficult and worth while and the honor always accorded a breeder of champions among good fanciers. To breed a great dog is a feat that calls for more than time and money. It demands brains and gameness and good faith.

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AT HOME IN THE WOODS

By JEAN INWOODS

How the Days Pass in the Quietly Strenuous Lives of Wilderness Dwellers

A CAMPFIRE is a wonderful institution. It serves many purposes, physical and spiritual. It has ever been one of my pet notions to maintain an open fire outside as well as inside the woods nest. So we have a great round, boulder fireplace in God's-out-of-doors which is near enough to the water to hear the lapping of the waves and to see the path of the moon on the water, yet sufficiently in the woods to look and to be the charmed circle. Around the circle and a little removed great pine trees wave like tossing plumes and tall white birches sparkle in the firelight.

This is our "Druids' Hall" and most truly the place of our dreams, jolly when companions are here, or wonderful with the heart's friends when silence is most eloquent. But it is when alone that it speaks to the heart its messages. One summer after a long, wearisome illness I spent the season here with only my maid. During that time many profitable hours were lived alone by my fireside. Alone, did I say? Not quite alone for there was always close beside the best woods comrade one ever had, a Pointer, to the woods born and so keen and fine that he seemed quite like folks. That year of all the queer wood-folk with whom I have made friends the most unusual came to me and hobnobbed all through the season,—nothing less than an immense solemn-eyed toad.

I noticed him hanging about the place early in the season, but at first gave little heed to him. He soon began to make his headquarters under the front steps and when we, my comrade and I, sat by the fire he would come out, hop up on one of the boulders, and sit there in an interested, wide-eyed, companionable sort of attitude which pleased me greatly. I had that year a resting place near the fireplace and under the sheltering, singing trees and it came to be the order of things that when I moved all moved. The fixed arrangement seemed to be with me on the couch, comrade on the ground close in front, Hop, as we called Mr. Toad, lying in the hollow at the root of the great tree, and on the foot of the couch, the aristocrat of the party, also always present, a splendid white Angora cat—a motley but congenial company, each respecting the rights and privileges of the other.

Hop, being unusual and a newcomer, was the object of general interest. He seemed to recognize my step as I came down for he would always pop out and join me, and to my delight he never did this with another nor followed any but me. With me he would hop all about the place and even to the very end of the wharf, though he never showed any disposition to go in the boats as the other two did. They insisted upon joining every fishing party, launch party, or merry-making on land or sea. Comrade and the Angora were most patient and interested fishers, starting at the sound of the reel with every sign of eager anticipation.

On our return from such trips Hop would be playing in the woods near the path or would join us from his under-the-steps retreat. When friends came if the party was small he would usually remain; if too many gathered he grew restless and finally would hop away to his "hogan." We ate out-of-doors much that year and he always attended the eats, perched by my chair, eating until satisfied, then waiting with his great

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eyes wide to take his place in the moving procession.

I grew fond of him and began to wonder what would become of him when our time of departure came and if he would be here to give me welcome next year. The poor little chap came to an untimely end. Toward the autumn, when the nights grew cooler, he evidently thought to find comfort near the fire and one morning I found his little body covered with ashes, half on a boulder and half hanging down as though he had fallen into the hot ashes and tried to escape but failed. Among my many woods-friends I cherish his memory.

Here I am away from my story. I began to tell you that when one learns the campfire language one can depend upon an out-of-door fire to reveal some very substantial truths in the course of a season, and during this particular summer one came to me which has proved itself a harbinger of peace; even this, the recognition of the fact that in my life desire has been the prophecy of fulfilment; that everything sufficiently vital to become a great desire or yearning in my heart has sometime taken form and grown into a reality in my life.

So this year one of the almost-too-good-to-be-true want-tos is ours. We are actually living a winter in the heart of the forest, apart from the haunts of man. To step out of one of the great cities, with its whirl, and its grind, and its grime, into the wildwoods with its quiet, its peace, and its tonic air is too wonderful for words.

We have found the beginning of it most novel and interesting, even exciting at times. The period of change in the woods is indeed most interesting, and as we walked we thought we could literally observe nature at work from day to day. This was particularly true of late September and early October, when the color changes were swift and glorious.

All sorts of lovely things were hidden by the foliage of summer. The place is well wooded and thick, hence the surprises are numerous, making all familiar paths of summer seem like new and unexplored places.

Trees are unusual in their growth. Perhaps diverted by some cause from their normal position, they have turned and twisted themselves into other forms and shapes in their struggle for existence. I noticed yesterday one great cedar, uprooted, lying across a huge rock and from its trunk six or eight thrifty young trees have put forth and stand upright and victorious. In tree-world this evident striving for life against adverse circumstances, odds against, and the success of the effort with its picturesque effect is both interesting and heartening.

Using the Environment

Some of these forest productions we transfer to the interior of our nest and use them for decoration. Just now we are putting on a few delectable lichens for handles and drawer pulls with charming effect. In contemplating the beauty and enjoyment of the woodland we are given to associate it exclusively with the summer season, with its beauty and profusion of foliage and flower, but to my mind the leafless period of autumn and the winter has its full quota of it all. The very lack of all that makes the summer forest attractive provides opportunity for making the acquaintance of hidden treasure. We thought we knew this place, every flower and fern, every tree and rock, every inch of the acreage, not so; perhaps after a year of uninterrupted residence we shall feel sure that we belong. The evergreens, snow covered, and the rocks lifting their green mossy crests above the white carpet of winter are entrancing.

And the little people of the woods, they too are uncovered by nature's change and brought into more intimate relation with humans. Wood-folk, we had not thought a part of our family, are here; when we do not see them we can follow their tracks and in some cases find them at home. While we are enjoying them as never before, they also are becoming accustomed to our presence and frequently express their approval by coming to us again and again.

Sometimes they take to their heels in a manner most laughable, as was the case of a big rabbit a few days ago when one of the workmen coming around the house

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was suddenly upon him, startling him into a break for the woods and almost wrecking himself and a neighbor in his undue haste. During the early autumn a lady partridge was in the habit of spending a great deal of time in our front yard. Day after day she could be seen walking leisurely about, and when we did not see her we could hear her in the shrubbery talking to herself as she was enjoying her solitary outing. On this memorable occasion she evidently was much preoccupied with her musings, and when Mr. Rabbit hit the trail at top speed, blind to everything in his path, his only thought to escape the formidable object coming round the corner, he met Mrs. Partridge, head on.

The shock of both was dreadful. As they rolled over and over it was difficult to distinguish feathered bird from furry rabbit. When they finally became disentangled Mr. Rabbit stumbled about for a moment in a dizzy sort of a way, then recovering both his fright and his legs, struck off for the deep woods, developing speed with every bound. He evidently did not consider apologies necessary nor did he wait to investigate any possible injury caused the lady by this unexpected meeting.

By this time she was hobbling around in a circle, dazed and bewildered, her usual tidy appearance sadly rumpled. She expressed in every movement, indeed in every feather, her utter amazement at thus being bowled over and suffering such indignity. She sputtered and she scolded, rather softly at first, though excitedly, but as she gradually recovered she raised her voice in indignant protest. She could not determine what force had met her but she knew it an occasion for words. The last seen of her was on the branch of a friendly near-by tree, where from a safe height she still sputtered, watched the ground below, and nervously arranged her ruffled feathers.

Another rabbit showing a different disposition has been eating with the men at lunch time, sitting on the porch, following the lord of the manor down on the dock, and being generally agreeable and friendly. A little striped gopher, too, has grown so familiar with household affairs that he dodges in and out under my very feet, absolutely unafraid and almost mischievous in the manner of his play, following and dodging and frisking over the porch, through the door and away again, quicker than a wink. A good fat squirrel comes to the window and begs, sitting on his hind legs, and chatters about many matters in neighborly fashion, taking from my hand a long, red apple peel and away up on the branch again, looking very picturesque as he holds it daintily in his paws, eating and turning to chatter at me the while.

One Thing After Another

We are almost always in the same boat with Jacob Riis in his "Happy Valley," we no sooner get busy and interested in one line of work than something rises up and demands immediate attention, and the whole force is moved from one important task to another for the moment more vital one. To-day we are running a race with an impending storm and it is as exciting as an automobile race or a baseball game. There is still a building in the throes of construction, though 'tis far past building season by the calendar, and by all signs known to the habitat when rain comes now it turns to snow, then a freeze up, and no more building.

Our across-the-channel neighbor was over with milk and butter this morning and left the encouraging message that, "We're going to ketch it now sure, the wind a-blowin' like this from the southeast ain't fer nothin'!" So the men are shingling away for dear life on that roof.

The building has some history to begin with. First we sank part of our fleet in bringing foundation stones across the channel. We were towing two scows, loaded with enormous rocks, and a row boat. The wind which was fresh when we went over early in the morning was now whipping up a sea that came into and swamped one scow, and she went down with her cargo. There was some laughable and otherwise excitement in an effort to rescue her, but it proved futile and she is wintering with the fishes. Then the building was abandoned by

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its builders before it was really begun on account of a most terrible pre-season storm which brought great disaster in its trail and was so suggestive of real winter that some of us settled down to winter living.

It was a real February storm precipitated into November. It was quite an experience for us and found us, in some ways, quite unprepared for such untimely visitation. Beginning with the usual rain from the southeast, with a good brisk wind which swung around to the northwest and brought snow, and lo; before we could catch our breath we were prisoners on our own estate, frozen in as tight as you please. We had in our ample storehouse all staples and winter supplies, but the milk-butter-egg end of it we expected to provide bi-weekly for some time to come. It so happened that the storm was on the milk-butter-egg day and before we were able to get out we had made some experiments in reducing the high cost of living.

And the lumber for that boat-house, that was the rub, it was reposing safely in the mill storehouse and yard and there were two inches of ice on our bay; no navigation, no hauling. Thus ten days passed, and we were becoming desperate. Finally the steamer, which had not been over before the storm, came plowing, sawing, puffing through the two good inches of ice. We hoped after the ice had been disturbed that it would break and disperse with the wind, as it often does for a period before it becomes heavy and thick, but there seemed little impression made upon it, save to leave a track of water behind the outgoing boat. A large tug passed through, still there was solid ice between us and the track of blue water.

We waited until the day following, and after the steamer had passed up and back, the men took scow and pike-poles and after much labor succeeded in breaking a passage from our landing to the open water. Then we took the motorboat and the scow and started to the mill after that lumber. The promise was rather unfavorable for a twenty-foot motorboat, though it had been temporarily ironed for just such occasions and we were buffeted and beaten about by the large chunks of ice, sharp as saws. We did reach the village, only to find the passage to the mill closed tight, and it remained undaunted by any onslaught we could make upon it. We returned without the lumber, but we had a ten days' packet of letters, a few supplies we had been neglecting to bring in, and belated freight, and we did not put port holes in our boat as our Frenchman had prophesied.

The Longest Way Round

The day following we tried it again, and although the steamer had made another trip through, we were forced to return on account of heavy ice. This was Saturday, and by Monday there was important outgoing mail, so Monday morning we put on our "seven league boots" and started for the village, the long way round. Usually, when in desperation we try this stunt, the channel either clears or the ice is immediately strong enough to hold us. This was no exception to the general rule, for when we reached the village we found the bay full of water with no ice in sight, and the mill people had launched their great scow and had it loaded with the coveted lumber.

Upon our return there was rejoicing when we found the tug had been here with the scowload. And now the last nails are being driven and the muskrats are already at work repairing their house which the workmen disturbed in making the foundation. They are not welcome guests as they gnaw the ropes and keep the place in a constant litter with the shells of their meals.

The field of ice was blown from our shore by a strong west wind, giving us clear sailing, and the channel has been free down to date, an almost unprecedented state of affairs for this time of the year.

So it is ever, here, "The old order changeth, giving place to new" in most unexpected times and places. A city is not to be compared to this neck-o'-woods for diversion and swiftly moving picture shows. And one year establishes no precedent upon which to base opinions or plan operations for another year. The

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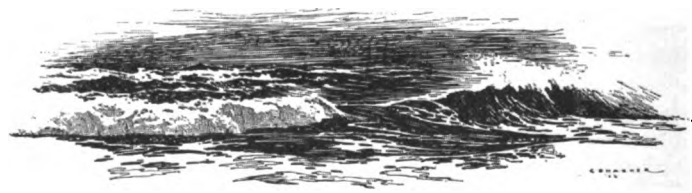
necessary effort to keep abreast of the times is positively rejuvenating. There is no time to grow old in the forest, one must sit down to grow old. There is scarcely time to invite one's soul.

For two months we have had a race on with winter. The only time we have had to read has been to snatch moments when the worker can listen with hands engaged or when he has been longer occupied with his well-earned meals and I, after finishing my repast, read aloud until duty calls him hence. Working outside until darkness covers the land is not conducive to literary pursuits during the evenings, not to mention the cheerful thought of the five a. m. call to arms. Such living does bring the gift of sleep and sends us to our "resting beds weary and content," besides giving us these near-winter mornings many a sunrise of beauty too rare to be told in words.

Last year we were here during the period of first ice and up to the time when we could walk over ice to the village, and while the steamer was still sawing her way through we had some thrilling experiences with the rowboat coming and going. We used it up to Thanksgiving. We were forced to fairly fight our way back through the blocks of ice, or to push the boat over ice from open water to open water, and when we reached the village the rowboat landings were frozen in and we were compelled to land just where the steamer had broken a landing place. It was a most inconvenient landing for a rowboat, almost impossible, so we built a small cedar ladder which we carried and threw the line on one end of it over the great iron hooks upon the pier and up we go, thus scaling the heights of Cedarville.

This year we are motoring during early December with no signs of a freeze-up except the promise of the pessimist that "We'll ketch it yit." And when we do "ketch it" we shall still be alive to the charm of it, the charm of the storms. At the village where the houses are close together and the chimneys all send forth the same type of smoke and the people talk to each other instead of holding high communion with nature in her various language, they cannot understand it, that the storms are one of our chief joys here in the wildwoods. There is something in the heart of man that responds to these tempestuous hours, that finds expression and relief in the roar and tumult; something that answers and sings with the wild, weird music of wind and wave, and in the soul there is born the courage to "Go forward cheerily, play martial music, and keep the step lively."



It has fallen to the lot of George Marvin to try the sport of surf-riding in Hawaii. The readers of the April OUTING will have the chance of doing it with him—the paddle out, the waiting for the right wave, the rush to the beach—all with unusual photographs.

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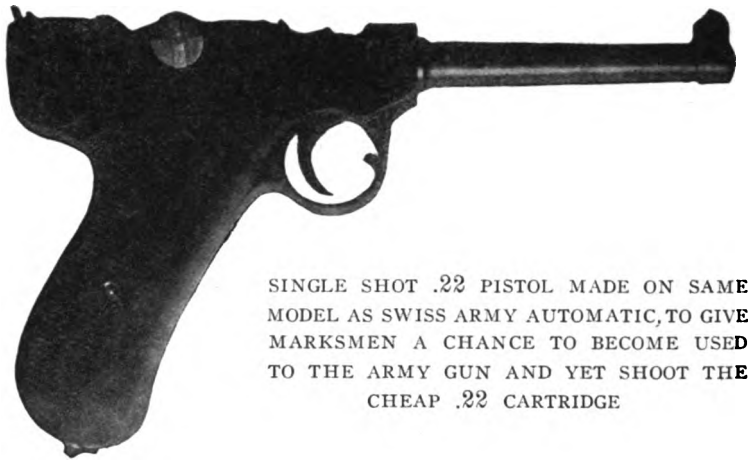


SINGLE SHOT .22 PISTOL MADE ON SAME MODEL AS SWISS ARMY AUTOMATIC, TO GIVE MARKSMEN A CHANCE TO BECOME USED TO THE ARMY GUN AND YET SHOOT THE CHEAP .22 CARTRIDGE

PISTOL PASTIME

By EDWARD C. CROSSMAN

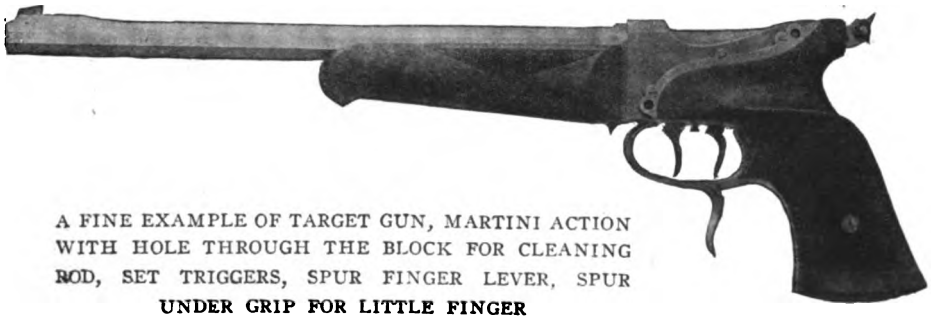
PHOTOGRAPHS BY THE AUTHOR

What Can Be Done at the Targets with the Twenty-Two and How to Do It

A FEW tin cans, a box or two of .22 shorts or long rifles, and a .22 pistol. The dullest afternoon cannot stay dull in the face of such a combination. Also there be various small animals and birds that look as well in the pot as in the wilds and that taste still better. Also there are snakes to dispatch, or perhaps a skunk to rout. Therefore I plead the case of the .22 pistol in the camp equipment.

When it is addicted only to .22 shorts or .22 long rifle cartridges, it is a very cheap little beast to feed. It is not noisy, does not carry to the next county, and does not kick your hand clear off the wrist.

This, be it noted, is not to use as an excuse for the tenderfoot who insists upon packing a cannon with him on the big-game hunt—as one man put it—in case he got to close quarters with a bear. The experienced hunter knows that if he gets to any sort of quarters with a bear in these days, he is doing



A FINE EXAMPLE OF TARGET GUN, MARTINI ACTION WITH HOLE THROUGH THE BLOCK FOR CLEANING ROD, SET TRIGGERS, SPUR FINGER LEVER, SPUR UNDER GRIP FOR LITTLE FINGER

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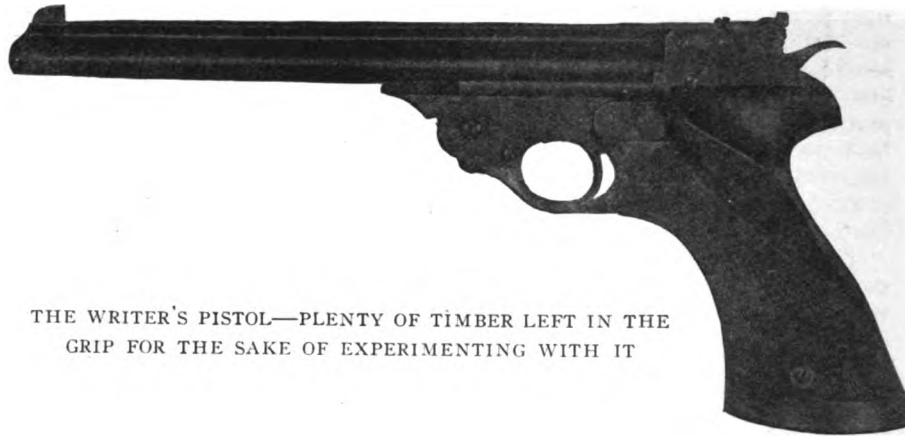

THE WRITER'S PISTOL—PLENTY OF TIMBER LEFT IN THE GRIP FOR THE SAKE OF EXPERIMENTING WITH IT

well, and that he needs no two or three pounds of hardware to help weigh him down when on the stalk.

I prefer the breed of pistol that sells for about $7.00, that weighs about 1½ lbs. with either six or eight inch barrel, and that shoots the cheap, accurate, quiet, and inoffensive .22 caliber cartridges.

A gunsmith can reduce the naturally heavy trigger pull down to three pounds and the gun thus tinkered does nicely until your own experience suggests other changes. Then a soft leather holster, with flap top to keep the gun from falling out, said flap fastened with a glove snap, and a soft leather bag to tie on the belt and hold the cartridges loose, completes the outfit, save for a cleaning rod and some oil.

There are seven barrels of fun in learning how to shoot a pistol of any sort, and the odd days in camp are the days to learn the art. There are various sorts of camp, but unless one is on a really-truly big-game hunt, in the very haunts of the game where the slightest sound counts, there is no camp where the pistol does not pay for its keep. In the hands of the expert, it will knock grouse off the limbs as neatly as a rifle, stop rabbits, and put snakes into the stages of that last wriggle that lasts until sundown.

The tyro, once he—or she—has learned that it is not good medicine to fire the gun by giving the trigger a convulsive yank gets on splendidly. It takes but a few days to get to the point where further proficiency is a matter of muscular training. The great stumbling point, like learning how to swim, is the very first step. Once you have learned how to keep yourself afloat, proficiency in swimming comes without much more discouragement. Once you have learned how to release the trigger of the pistol and have learned why you hit the ground half way to your mark, then your pistol-shooting improves more rapidly than you in your most conceited moments believed was possible.

I would divide proficiency with the pistol into three great stages: The

A DE LUXE PISTOL WITH SINGLE SET TRIGGER

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first, mastery of how to squeeze off the trigger without disturbing the aim; the second, the control of the arm muscles, gained only by practice, that enables you to hold the gun nearly motionless; the third, such control of the trigger finger that you can hit flying objects.

The average man would not believe possible such extraordinary skill as can be attained by practice with the pistol at flying objects. I have seen humble amateurs do work with the hand-gun that only a Topperwein or a Razee could equal with a rifle, hitting marbles, coins, and such small objects, thrown into the air.

Happily .22 ammunition is quite inexpensive. You can fire a thousand shots of shorts at the cost of a couple of dollars, and the more powerful long rifle costs but forty or fifty cents more. The outdoor lover desiring to become a shark with the pistol can do it and still eat.

THE ARM MUST BE FULLY EXTENDED

THE REGULATION TARGET GAME, TWO OF THE FINEST PISTOL SHOTS IN THE COUNTRY FIRING

It is well to remember that the pistol is the most dangerous of firearms in its playful habit of pointing at all four quarters of the compass at once. It is not the arm with which to break in the absolute tyro in gunnery, nor is it the arm to intrust to the boy, however skilful he may be with the rifle. Boys are born careless, and some never get over it. This need not frighten anyone off: safety lies, as with the rifle, in seeing that the gun points only at the thing to be hit, and being particularly careful once it is loaded, cocked, and ready to shoot.

With the beginner the first one hundred shots may well be fired with nothing more

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BE SURE THAT THE MUZZLE POINTS DOWNWARD WHEN LOADING

than a cartridge in the chamber to take up the blow of the hammer. Careful, concentrated attention to letting off by a slow squeeze of the hand, and not by a yank at the trigger, soon puts one on the right track. Just so long as the gun's muzzle bobbles or flops downward as the trigger is released instead of remaining motionless, just that long is the neophyte unfit to use cartridges. They serve but to distract the attention and to confuse the natural swaying of the untrained pistol arm with the "trigger-yank" that is characteristic of the beginner. Until said yank is forgotten, progress is at a standstill.

It is well to cultivate an easy and graceful standing position from the first. With the body on a strain it is unsteady, and the position of shooting a pistol is unsteady enough at the best without adding complication.

The right-handed shooter should stand with the right side toward the target, right arm *fully* extended, not the half-baked crook that is never used by an expert, left hand on the left hip or with the thumb hooked in the belt, whichever appeals as being easy.

Then all there is to shooting the pistol well is to align the sights on the mark and squeeze off the gun with a slow contraction of the entire right hand. Never mind at first the uneasy swinging of the sights across the paper, muscular training alone can overcome this. Don't try to release the hammer at any given time at first, just keep squeezing until you can slip the trigger from the hammer without interfering with the irregular but slow swaying of the sights across the target.

The control of the trigger, which is easy with the rifle, comes only by long practice. Don't try it at first; the gun should go as rather a surprise party, as the result of your slow, careful squeeze, and not as the result of any effort of yours at any certain time.

Don't, as you value accuracy, "meet" the gun when you think it is ready to go, by tightening up on the grip, by stiffening the arm muscles, or pushing forward to meet the slight kick.

If you get the flinch habit, more fatal than the natural trigger yank which you try at first to use, improvement will stop then and there until you get over it.

Hold the gun on the mark *after* the shot has gone. With a loaded gun the slight recoil will take it off, but you continue to hold, try to hold the gun still after you feel the recoil. It is a good habit, in snapping the empty pistol, to hold still while you count two, after the snap of the falling hammer.

In the camp the most fun is to be had out of the extemporized marks, cans, knots on dead limbs—things that show immediately and strikingly the hit of the bullet. When the gun has been mastered enough so there is no danger of reverting to the old "yank-the-trigger" procedure, a lot of amusement may be had with a stop watch and the timed fire methods.

Start with the gun cocked but pointing downward at a forty-five degree

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angle. Have the timer say "Fire" unexpectedly after you've signified that you're ready, and start the watch as he says the word. It is up to you to raise the gun and fire as quickly as you can catch the sights and get off the shot without yanking the trigger. The watch is stopped the instant the shot goes, and the timer puts down both the value of the shot and the time it took to fire it. Five shots make a score, and the winner should be the one who is best both for quickness and accuracy of performance.

In this game the mark should be large, say a man's sized figure at thirty feet, in which you can roughly draw zones having different values.

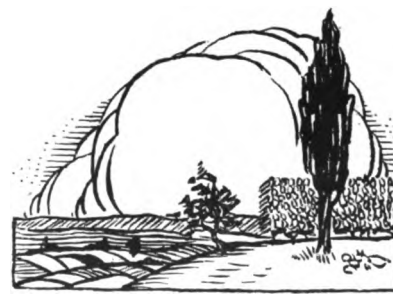
This sort of thing gives the quickness and the accuracy that might come in as a life-saver in the emergency that none of us want to see, but that may come at any time.

For competition among fair pistol shots in the vacation camp, get what are known as "20-yard Standard American targets." This is the standard for short range among pistol men. The bull's-eye is 2.72 inches across, and contains the eight, nine, and ten ring, while the whole target is large enough to catch all the shots of a fair pistol man. Twenty yards is the regulation distance—and among revolver and pistol target shooters the target is invariably used indoors by artificial light.

Just to give you a line on what expert shots can do, the record on this target, indoors, is a possible score of ten shots —ten shots in the little ten ring, which is about an inch across. Scores of ninety are common enough—and ninety means either ten shots in the nine ring, or five shots in the ten and five in the eight ring, or some such score.

The standard of the target man is a two-pound trigger pull on the pistol, and a three-pound pull on the revolver. He cannot have his sights more than ten inches apart, which means on American guns a ten-inch barrel is the limit. He cannot use a peep sight, nor have a rear or front sight that approaches the peep in form. His usual equipment is one of two accepted forms, the first a large or small bead, with a "Z" shaped notch cut in the rear sight, or else the Partridge sight, which consists of a square, flat-topped blade for the front sight, and a square notch in the rear sight, just wide enough to admit light on either side of the front when it is pulled down into the notch in aiming. It is held correctly when the top of the front blade is level with the top of the rear sight bar.

Don't use smokeless or greaseless .22 rimfire cartridges of any make. Some are less evil than others, but nearly all smokeless rimfire ammunition is very likely to cause rust despite careful cleaning, and it costs more into the bargain. Get greased .22 shorts or long rifles, loaded with any standard American make of ammunition.



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THE TRUE ADVENTURE

By WALTER PRICHARD EATON

DRAWING BY WALTER KING STONE AND PHILLIPPS WARD

EVERY child, they say, reproduces in his development the history of the race. Every boy, at some period of his growth, is Columbus, De Soto, Cabot; the urge of adventurous discovery is in his heart, and he voyages on strange waters. It may be he goes in a canoe, it may be a rowboat, or it may be only an old punt, flat-bottomed and square-ended; it may be that the waters are large, or it may be they are no more than a flooded meadow or a millpond. But, swift or humble be the craft, deep or insignificant the waters, on a day in March when the ice is out the far gods call to the heart of the boy, and he pushes off.

Our spring voyaging was done on Birch Meadow. To call Birch Meadow unknown waters might seem ridiculous at first thought. Had we not skated on those flooded cranberry bogs amid the woods all winter? But when the ice went out of them, they were unknown waters just the same! The very woods were different as we went through Love Lane toward "the Cove." The water was higher. Hummocks where we had sat to put on our skates were submerged. There was a smell of washed pine-tree roots. The opposite shore, reached so easily in winter, now looked far off and misty over the dancing waves; the veil of March was in the forest wall. Into the old flat-bottomed boat we climbed, and headed out from shore tingling with excitement.

As we passed "the Island" we saw the charred embers of a winter bonfire, lapped by the risen waters, and thrilled to the recollection. It seemed the last hint of familiarity. Soon we were out in mid-pond, and everything was strange. Pulling a boat was strange; the lower angle of vision from a boat's seat was strange; the forest wall, hazed with spring, was strange; and strangest of all was the farther side, where Stony Brook came in. Here, on the risen waters, we could push the boat far in among the swamp maples, and even pole it up the swollen brook a way, till around a bend the stone bridge came into sight. To see the stone bridge from the under side—to be a part of the stream beneath, not the road above—was an adventure!

Then there were boggy edges to explore all around the pond—spots which were not flooded in winter, or else not frozen—spots peopled by muskrats, too. It was almost like stealing into a town to nose the punt among the muskrat houses and poke at them with an oar, in the hope that some occupant would dive out under the bow. One could easily land from a boat, besides, at points which could be reached on foot only by long detours. And, best of all, one could land from a boat on an island and be free, exclusive, independent! In winter anybody could skate to the islands, but in spring we who controlled the punt and its padlock were supreme masters. Oh, the huts we built there! The wild carouses we enjoyed—on fried eggs and swamp-water tea! In April they let out the water, to run the sawmill, and by the first of May the old punt, chained to an oak tree, lay groggily tilted on dry grass, and a shimmer of romance had darkened off the world!

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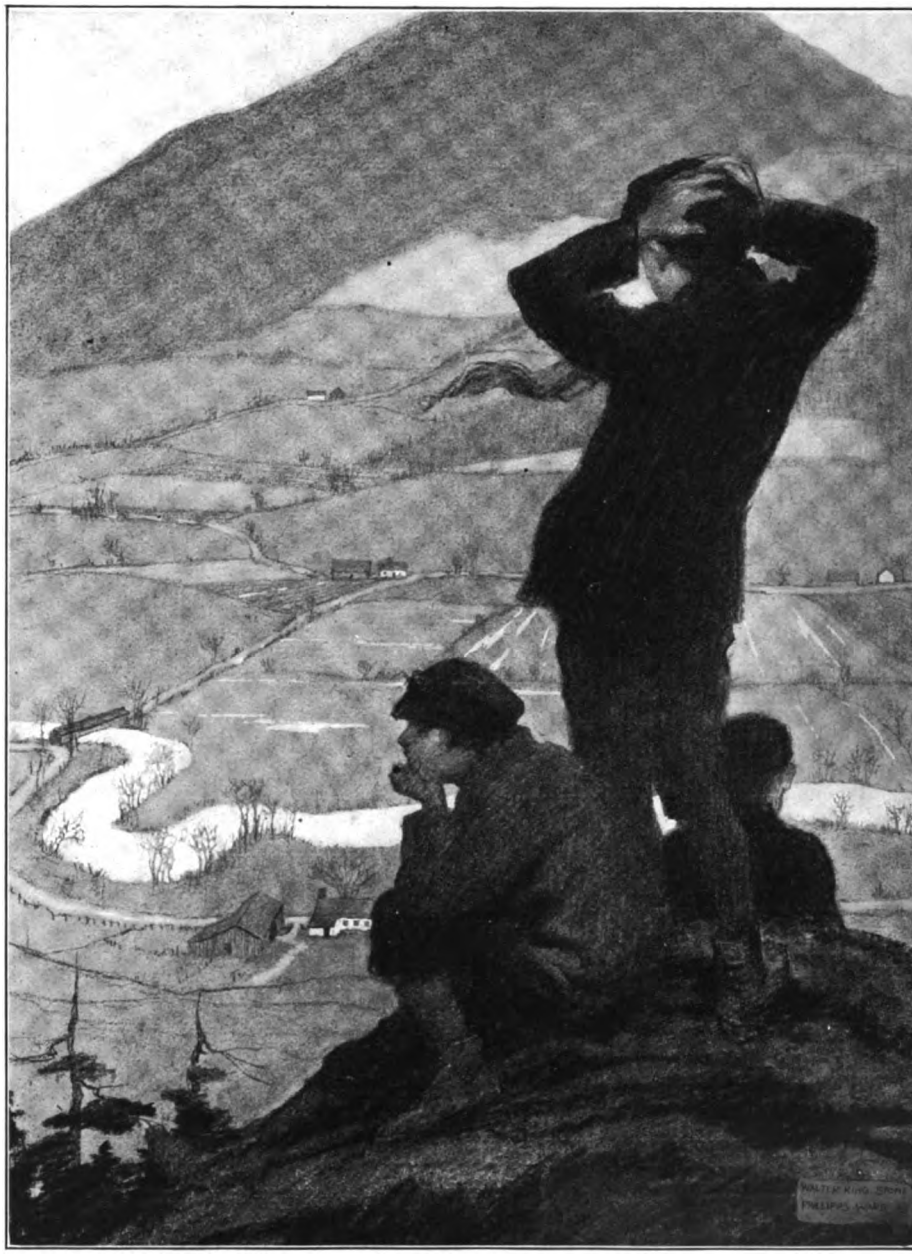

ON A DAY IN MARCH. . . . THE FAR GODS CALL TO THE HEART OF A BOY

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BLOCK THAT KICK! STOLZ, OF OLYMPIC CLUB (SAN FRANCISCO), ATTEMPTING TO KICK TO TOUCH

WHY CALIFORNIA LIKES RUGBY

By A. A. GOLDSMITH

ILLUSTRATED WITH PHOTOGRAPHS

CALIFORNIA is a land of rebellion, in politics, in art, in literature—in athletics. While the rest of the country is playing Intercollegiate football, the Coast is playing rugby and enjoying it. At least, they say out there that they enjoy it, and they ought to know. The reasons for this change and this present state of athletic affairs make an interesting chapter in American athletic history. Mr. Goldsmith voices the sentiments of an undergraduate in one of the Coast universities and may be presumed to speak for his fellows as well as for himself. This is the first authentic voice we have heard on this subject from this point of view.

IN the spring of 1906, the presidents of Leland Stanford Junior University and of the University of California announced to their respective institutions that they must give up the game of Intercollegiate football, and offered them the game of rugby as a substitute. This announcement was received by no means enthusiastically, as both institutions regarded their annual football contest as the culminating athletic event of the year.

There were three good reasons advanced for the abolition of the Intercollegiate game. These were the preponderance of mass plays and the subsequent brutality, and that the old game was played too much as a business. Taking up these objections in the order stated, the substitution of rugby came at a time when the old game was on trial for its life in the East. It was finally acquitted, on condition that the changes in the rules that were pending would open up the game and do away with the brutal element. Although this factor of brutality and concentrated mass plays was not widespread on the Pacific coast, Stanford and the University of California condemned the game on the crimes of the East. Lastly, the accusation of making football a business is not removed

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by the playing of rugby instead of the old game.

When time came to get out for practice for the new game of rugby an extremely large number of candidates made their appearance on the field, as it was stated that rugby was "any man's game." The feeling of the student body, as a whole, at both institutions was one of lack of interest. There was no turn-out at the practices nor at the games with Pomona College and the University of Nevada, institutions which took up rugby with California and Stanford. The main reason for the lack of interest shown by the spectators was the fact that they did not understand the game and could not see anything to compare with the plays of the old game.

The constant kicking to touch made the game monotonous, the spectators forgetting all about the frequent delays in the old game when the teams had to be disentangled after a line buck and the injured men brought back to condition again. The first real interest in rugby came at the time of the Vancouver-Stanford games. Vancouver had sent to meet the coast universities a team composed of veteran ruggers who had played the English game since their childhood.

When the Stanford team of 1906 held the invaders, and finally beat them in a very exciting and spectacular game, the Stanford student body became staunch supporters of the new game, and the bleachers were full when Stanford met the Vancouver team for the second contest. After the second victory no one would have thought of returning to the old game.

The student body of the University of California got behind their team very early in the first season, as they had been defeated by Stanford for three consecutive years, and they thought that, with the introduction of rugby, their chances of victory were very bright. They were able to secure an old graduate as coach, who had played the game in New Zealand and Australia. This gave them a great advantage over Stanford, as the latter institution had no coach who knew anything about rugby.

RETURNING A PUNT

Indeed, Jimmy Lanagan, Stanford's wonderful graduate football coach, handed in his resignation when the announcement of the introduction of rugby was made. The Athletic Committee would not accept this offer of Lanagan, and retained him as head rugby coach. During the summer of 1906, Lanagan studied what little he could in Canada, and returned in the fall to whip a winning team into shape. He did this, Stanford winning the first game of rugby against the University of California by a score of six to three.

From that time on rugby was fairly launched on the Pacific coast. All the colleges of northern California took the game up. Also the athletic clubs of

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San Francisco began to put teams in the field, and this gave competition to the teams of the big universities. This removed the objection that, with the introduction of rugby, the teams of Stanford and of the University of California could not get the requisite competition necessary for the development of well-rounded teams.

After the first year or two the spread of rugby became rapid. The University of Southern California adopted this style of football in 1910. The rugby movement struck the preparatory schools in northern California as soon as the big universities adopted the game. Palo Alto High School and Berkeley High were leaders among the "prep" schools. Their example was quickly followed by all the high schools in the vicinity of San Francisco.

Division in the Prep Schools

As the University of Southern California was behind Stanford in taking up the English game, so were the high schools of the South behind those of the North. The two large high schools of Los Angeles played their last game of Intercollegiate football in the fall of 1907. At present the preparatory schools in the southern part of the State are about evenly divided between rugby and the American game. Most of the institutions playing the Intercollegiate brand of ball would like to change to rugby, as they can see that it is the ultimate game on the Pacific Coast, since the majority of their graduates, who go to college go to a university that plays rugby.

The reason that the schools that play the eleven-man game continue it is that they are afraid to take up rugby now and be so far behind their more far-sighted rivals who adopted the English game a few years ago. Even with the handicap of having to play against more experienced teams, every year sees additions made to the number of "prep" schools that play rugby.

A great factor in favor of rugby is the opportunity for international matches. The United States is the only country that plays the Intercollegiate game. No matches can be played with foreign nations. The newspapers can only *name* the All-American team, but it has no one to play. How different it is with rugby! In that game the American teams can meet teams of all the English-speaking nations of the world. The All-American rugby team is not a newspaper team, but is a fighting machine composed of the best rugby players in America, that comes right out of the paper and meets foreign opponents, as other American teams do in track and field events, and in rowing and polo matches.

There have been five invasions of foreign teams that have played rugby on the Pacific coast. A picked squad composed of the best rugby players under the jurisdiction of the California Rugby Union (which union, by the way, controls the playing of rugby in much the same manner that the National Baseball Commission controls the playing of that game), was sent on a tour through New Zealand and Australia in 1909.

The first foreign rugby team to play on the Pacific coast was the Vancouver team, which met Stanford and the University of California in 1906. This team was the only foreign invader that was ever beaten in the majority of games played here. A return trip to Vancouver was made by the Stanford team in the Christmas vacation of 1906. In this trip the college boys from sunny California were beaten in both the games played.

In 1907 a picked New Zealand team met the teams of the Pacific coast and swept everything before them. Their playing was a revelation to the players on this side of the water. It spurred the American teams to greater efforts and showed them the possibilities of rugby. The New Zealanders also taught their opponents many fine points of play.

The next foreign team to play on the coast was the Australian team of 1908, known as the Wallabies. While this team was not as expert as their New Zealand brethren, they also won every game they played here. The Australian Rugby Union sent an invitation for a return match to the California union, and in the summer of 1909 the American team left for the Antipodes. They

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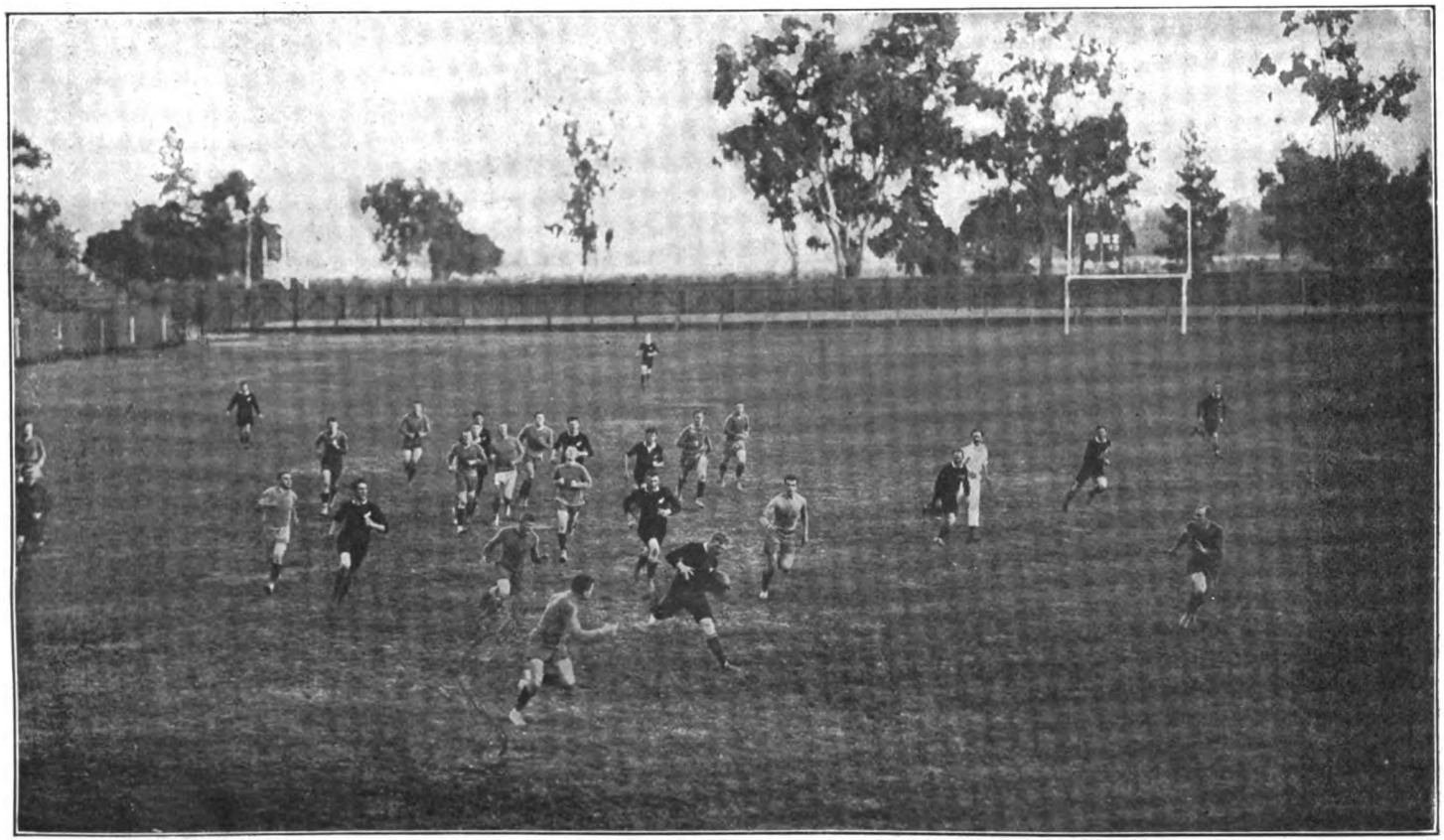

NEW ZEALAND SCORES AGAINST STANFORD BY PASSING RUSH (NOTICE PLAYERS ON EACH SIDE OF MAN WITH BALL, TO WHOM HE CAN PASS)

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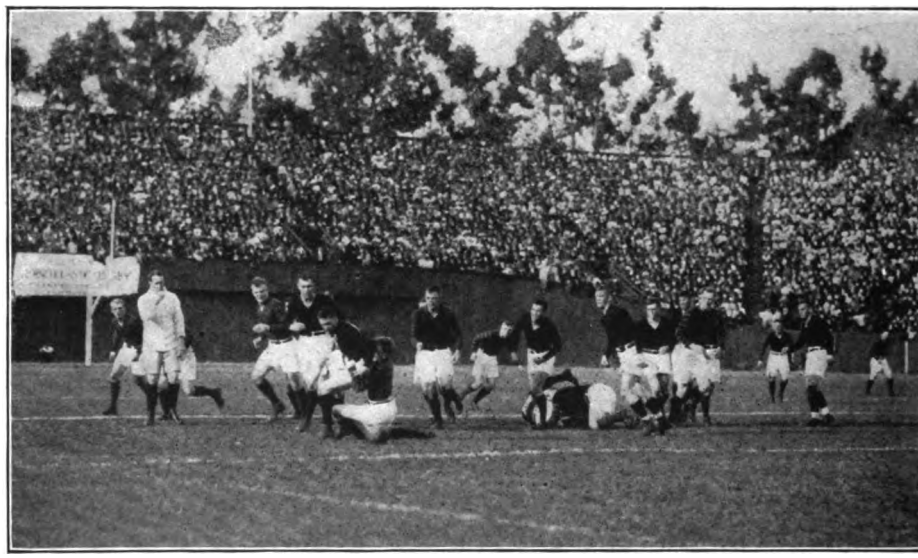
were royally received and fêted while guests of the Australians, and enormous crowds turned out to see them play against the native teams. Although they were generally beaten by their more experienced opponents, the Americans made a very good showing and thoroughly enjoyed their trip.

The coming of the Australian Waratahs last year furnished the next international match. This team was not as successful as its predecessors had been, and was beaten once by both Stanford and California in wonderful exhibitions of rugby football. The rapid improvement in the American playing caused the downfall of the Waratahs, and not the fact that they were in any way inferior to the previous invading teams. The All-American team, however, was defeated by the Australians, due to its lack of practice.

The visit of the Waratahs was followed by the coming of the New Zealand All-Blacks last year. This team holds the rugby championship of the world, having defeated the teams of England, South Africa, and Australia. Just before leaving for America they won from the Australian Waratahs by a score of 30—0. In landing, their motto was given out to be "Our goal line not to be crossed while on foreign soil," and they were disappointed only once. They won from the crack team of Stanford by the enormous scores of 54—0 and 56—0. These games were on the Stanford turf field, where the All-Blacks were more at home than on the dirt fields they had to play on later.

In their final game against the picked American ruggers these wonderful players from across the Pacific ran up a score of 51—3, and that on a muddy dirt field. The single score of the American team was made on a penalty place kick.



PLAY IN STANFORD-CALIFORNIA BIG GAME AT STANFORD FIELD

The New Zealand All-Blacks showed that rugby is essentially a game where speed and skill are paramount. Every member of the New Zealand team is able to run a hundred yards under eleven seconds, and three or four men on that team have done the distance in ten flat. They also showed us the value of a good swerve. The author has seen a New Zealand back run through the entire All-American team for a touch-down, or, as it is called in rugby, a try.

This element of speed was further brought out in the last California-Stanford game in which the latter team won by a score of 13—8. Every one of the Stanford backs was capable of doing

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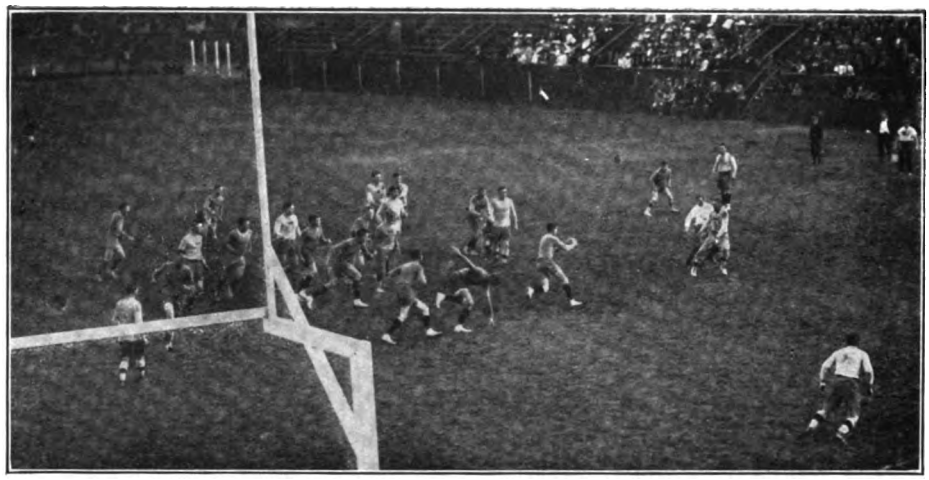
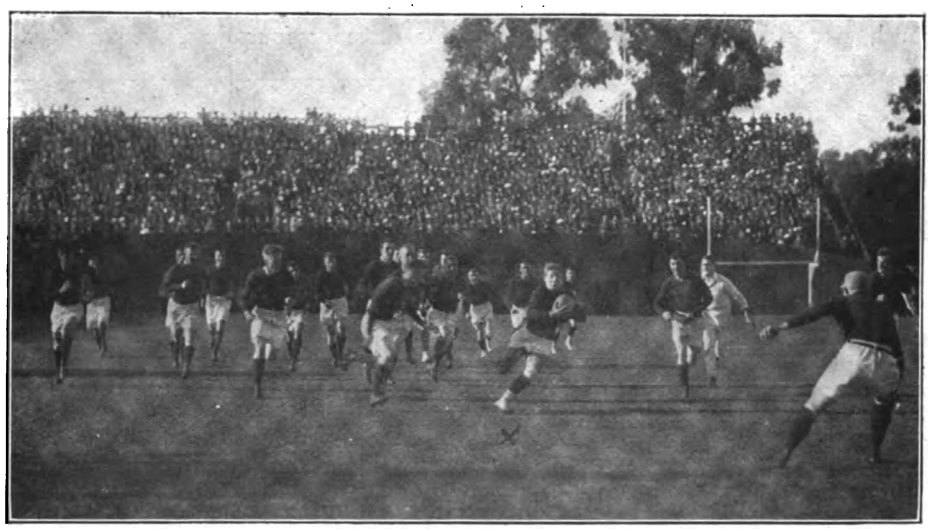


OLYMPIC CLUB PLAYER KICKING TO TOUCH IN PRACTICE GAME AGAINST STANFORD 'VARSITY

better than eleven seconds in the century event. The speed and the wonderful swerve of Austin, Carrol, and Lachmund, the Stanford back-field stars, were responsible for the scores that defeated the University of California. The only points scored by the latter were through a field goal and through a Stanford fumble that one of the heavy California forwards bucked over from the Stanford three-yard line.

We may truthfully say that rugby on the Pacific coast centers around what is known as the Big Game, which is played each year between Stanford University and the University of California. This contest draws people from all over the country, graduates of both institutions even coming from Manila and the Hawaiian Islands to witness the struggle. No regular sale of seats is made to the public, alumni, undergraduates, and graduates buying all the seats for sale. At the game this year on Stanford field there were over twenty-one thousand spectators, every seat being filled and



FRANK (X) (STANFORD) RECEIVES PASS AND MAKES EIGHTY-YARD RUN FOR A TRY IN THE STANFORD-CALIFORNIA GAME

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more than four thousand persons having standing room. The total receipts for the game were over forty thousand dollars.

The question of a referee for the Big Game is very important, as feeling runs high, and only a very capable and impartial man can do the work. The man who controlled the Big Game last year and the year before was W. W. Hill, of Sydney, Australia, said to be the best authority on rugby in the world. Referee Hill made the trip for the last two years at the request of the California Rugby Union, and came across the Pacific for the express purpose of refereeing the Big Game. His work was perfectly satisfactory to all, and that is saying a great deal about the work of any football referee.

Rugby has taken a permanent hold on the Pacific coast, and has proved to be satisfactory to both players and spectators. Let us look into the reasons why rugby has so successfully displaced the Intercollegiate game.

The opponents of rugby charge it with being a "pink tea" affair and in a class with checkers. Anybody who has ever seen the game played soon drops that idea as absurd. A glance at some of the photographs will show how far rugby is from being a ladies' game. Just take a glance at the build of some of the players in the illustrations. Do they look much like participants in a game of tiddle-de-winks? The tackling in rugby has to be even surer than in the old game, as the tackler has to smother the ball as well as stop the player.

While rugby is devoid of fatal injuries such as concussion of the brain and broken necks, there still are chances for injuries and the player that can go through the whole season without some injury is very lucky. Broken bones are rare, due to the absence of mass plays. But sprains, pulled muscles and tendons, and bruises, are as much of a bother to the rugby trainer as to his fellow-worker on the football field.

Rugby is very much faster than the old game. As it is played on turf and as there are no mass plays, the contestants do not have to wear any heavy armor, as in Intercollegiate football. As may be seen in the illustrations, the players wear a light, unpadded jersey and track pants. Their costume is such that they are not handicapped by extra weight and their speed can be as great as if they were running on a track. Again the padding necessary in the Intercollegiate game takes the life out of the players quickly, and the effects of a hard game, played in such a suit and with the grinding work of the mass plays, are sometimes lasting on the players. In the recent Harvard-Princeton game the players were so worn out from the hard fight that they could not report for practice for three or four days. Some of the

AUSTRALIAN WARATAHS GIVING THEIR WAR CRY BEFORE THE GAME

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A DRIBBLING RUSH

players were even sent to the infirmary to rest up.

The condition of a rugby player may have to be better than that of a player in the old game, due to the incessant and speedy play, yet after a hard match the after effects are not bad at all. When the player has come from the shower after his game he feels as fine as though he had but taken an ordinary amount of exercise. He can go back to his studies after a hard practice better able to do his work than before the practice.

Compare this to the condition of, let us say, a tackle, when his evening practice is over. He has had to go through a monotonous grind of signal practice in which he could not have found any pleasure; then let us say he has bucked and been bucked through half a dozen times. His exercise resembles the work of a weight lifter, or of a farm hand who has pitched hay all day. Is there pleasure for the player in that kind of work? Possibly, but we doubt it. His only pleasure is to be found in the honor he may win while playing. Rugby is as much fun for the player as baseball, and there are few who will deny that baseball is fun.

Because there is so much pleasure to be had by playing rugby, one will find games being played day after day after the regular season is over. For example, at Stanford teams are organized so that all can play, and even after the Big Game with California there are over one hundred and fifty men who play rugby daily. More than ten per cent of the men in college have been out for rugby all through the fall term. Can this be said of the old game?

Now let us look at rugby from the standpoint of the spectators. The author will grant that spectators who know nothing about rugby and have been brought up on the old game, will certainly not be much interested in the first game that they see. But after they understand the rules and see the spectacular passing rushes and wonderful kicking, they become firm converts to the English game. Everyone will acknowledge that the most spectacular plays in the Intercollegiate game are the forward passes, the end runs, and the other plays that are open. In a game of rugby a premium is placed on the open game, and consequently the play is brilliant and spectacular. Nothing can be finer than a passing rush where the ball is carried from one end of the field to the other by the whole back-field and with no interference.

The only objection that a spectator can have to rugby is that there is too much kicking out of bounds, or, as the rugby player will say, "kicking to touch." When this latter play is understood it adds to the beauty of the game. At all events the kicking to touch is not half so monotonous as waiting for the line to form again after a line buck and waiting for the players that are "out" to be revived.

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In summing up, we would say that both from the spectator's view-point and from that of the player himself rugby offers more pleasure than the old game. No dreary signal practice, no being battered to a pulp, but a brilliant, speedy game. No tiresome delays while injured players are being removed, no long waits for the line to be re-formed, but the viewing of a game *by the players,* and not by the coaches, where every play can be seen, and with the prospect of international matches; these are the things that have contributed to make rugby a permanent game on the Pacific coast, where formerly Intercollegiate was king.

AN HOUR WITH THE BARRACUDA

By F. W. STERLING

ILLUSTRATED WITH PHOTOGRAPHS AND A MAP

A Tale of Lively Sport in Leisure Hours off the Rio de Tuxpan in Mexico

THE unfished reef, the Mecca of all sea anglers, furnished us an hour of sport long to be remembered. Our reef is ten miles east of Rio de Tuxpan, Mexico, an atoll, an island in the making. Tuxpan lies about six miles up the Rio de Tuxpan.

White bass were reported just within the river mouth, but a heavy sea on the bar made this sport impossible, so it was decided to try our luck on the reef. This, the northern season, is hardly a propitious time to venture ten miles at sea in a small boat, yet we were fired by the possibilities of an unconquered world of sport. Our boat, a twenty-six-foot New England motor-dory, is one to invite confidence in any seaway. This day we ventured forth with a bad transmission, and it was impossible to go astern. This was but an added zest with which to approach a strange reef. All was promptly forgotten on arrival at the reef.

Spoons were put over far out from the reef, and while still a hundred yards off, "Zing!" and the Surgeon's reel was humming. One hundred, two hundred feet of line was gone and still going with the leather brake hard on and getting hotter every minute. Then, with a great surface flurry, a veritable tiger of the sea leaped into the air, truly a forbidding yet graceful sight. When it fell back with a large splash we knew he was well hooked and it was but a matter of time before a new record would be made for the boat.

The boat was stopped and a pretty fight was on. It lasted about fifteen minutes. At times the fish was reeled into sight and then was away with a rush that could literally carry the Nimrod overboard or smash all the gear if not anticipated; again he would jump, opening his great mouth and displaying his formidable teeth; he would rush the boat so swiftly that the reel could not handle the slack. At last, with circling rushes around the boat, this beauty was brought nearly to gaff, only to shy off at sight of the boat.

His undoing was what appeared to be a last convulsive jump. At least, about one-half of his body broke the surface and "the butt" finished him. When brought to gaff it was conceded that our previous record of thirty-seven pounds was broken by a small margin. The previous record was considered very large for the waters along this part of the Mexican coast.

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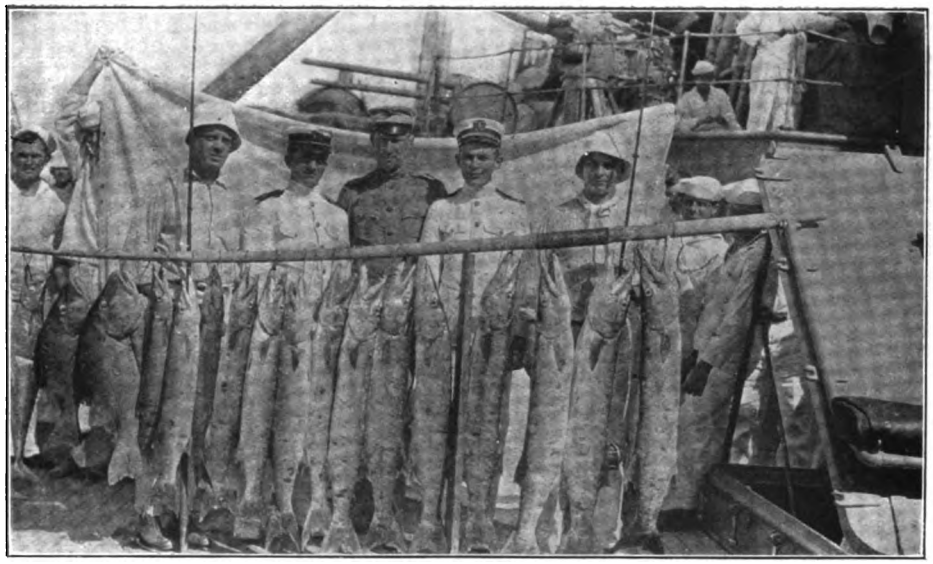

THE TOTAL CATCH ON THE SECOND DAY: BARRACUDA, 285½ POUNDS; RED SNAPPER, 47½ POUNDS; SPANISH MACKEREL, 15½ POUNDS

Three hours after landing, this fish weighed 38½ pounds and measured 5 feet ½ inch. It was an oldster with a single tooth in the point of its lower jaw; its pointed mouth resembled a bulldog in that the lower jaw protruded slightly, and both jaws were lined with razor-sharp teeth on which a heavy lashing line could be cut as with a knife. In appearance it was vicious, cunning, and vindictive, a brute that stirs the lust for slaughter.

With such an auspicious opening we were eager for the fray. Spoons were soon over and within a minute "Whee," the music of the reel, had started again. This time a youngster broke the surface, estimated at about fourteen pounds, a bright, silvery arrow in the sun. He circled and rushed, in fact, took out quite as much line as grandpère before he could be checked. The young are very cunning and as game, pound for pound, as any fish that wags a tail, unless we except the Spanish mackerel of this coast. They are prone to rush the boat; in fact, they appeared to do this deliberately in order that they might part the line on a counter-rush. The young is not so dignified as the older fish, in fact, when first brought to gaff, "excited" best describes it. However, it calls forth the angler's best endeavors to outwit it.

The young fish furnishes excellent play for the gaffer. As it lies alongside the boat in a smother of foam, turning and twisting to get its head down for a rush, it is pretty work to gaff the slender, pikelike body on the first stroke, and a good stroke always calls forth a grunt of appreciation from the man behind the rod.

The hour's catch, two rods, was nine fish, 187½ pounds of *Genus Spyraena,* Species Barracuda, an hour of wonderful sport considering the fact that every foot of line was well disputed. A shortage of fresh meat made this particularly acceptable. As food they are excellent, the young being particularly delectable.

Live bait was not available, so the No. 7 spoon was used and proved an excellent lure. The barracuda is of a very curious nature. I have heard him compared to the gazelle. This curiosity combines with its voraciousness at unfished Tuxpan Reef to furnish the fisherman unequaled sport.

They could be observed swiming about, their long, muskellungelike backs being colored like the rocks below, the older ones having a greenish tint on

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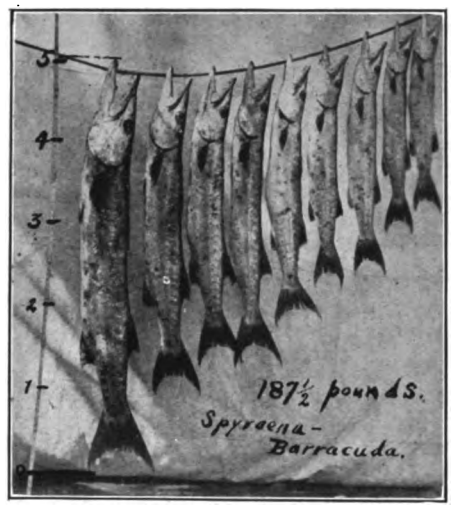

AN HOUR'S CATCH WITH TWO RODS

the back with vertical black stripes and silver belly, while the young were silver with black stripes across the back. They slide gracefully along with no apparent movement of the body. When frightened they literally dart like an arrow.

Only one fish marred our unbroken run of the species. We had located "the spot," a beat of about four hundred yards up and down between the coral island and a point of the atoll. On one trip, having wandered too far along the point, I hooked a Spanish mackerel that gave me one of the prettiest fights I have ever had.

He rushed from side to side, but only jumped once. I have observed that the Spanish mackerel of this coast is not such a leaper as his West Coast brother; not a sulker, but, dashing about the surface, he is game and furnishes all the necessary thrills. Vigilance from the strike to the gaff is needed to land him, and the beautiful rainbow coloring, the delicate pinkish iridescence out of the water is one of the remarkable sights of the organic world. This fish scaled 21¾ pounds three hours after catching, and is the largest I have ever landed. Twenty people enjoyed him for lunch, the best eating game fish in the sea.

A second trip was made to Tuxpan Reef to determine whether our lucky first day was a fluke or our catch could stand as an average. This day's catch consisted of 285½ pounds of barracuda; the largest scaled 28½ and the smallest 14, a gratifying catch for two rods.

On the third day I was accompanied by a tyro and had considerable amusement watching a twenty-seven-pounder attempt to drag him overboard. He was landed after considerable sport, the fish having all the sport until his career was cut short by the gaff. This day my best endeavor was made to recapture the record from the Surgeon, but a thirty-two-pounder was the best catch my fish lore would allow. We are still scrapping it out.

The barracuda is at its best when it can get its body along the line opposed to the angler. In this position it can rush line without end. If the angler keep its head up, it is nearly helpless. Here is where my tyro failed.

One of the most marvelous fishing sights that ever gladdened my eyes took place on our fourth day out. This day

THE ONLY FISH THAT BROKE THE RUN OF BARRACUDA: SPANISH MACKEREL, 21¾ POUNDS THREE HOURS AFTER LANDING

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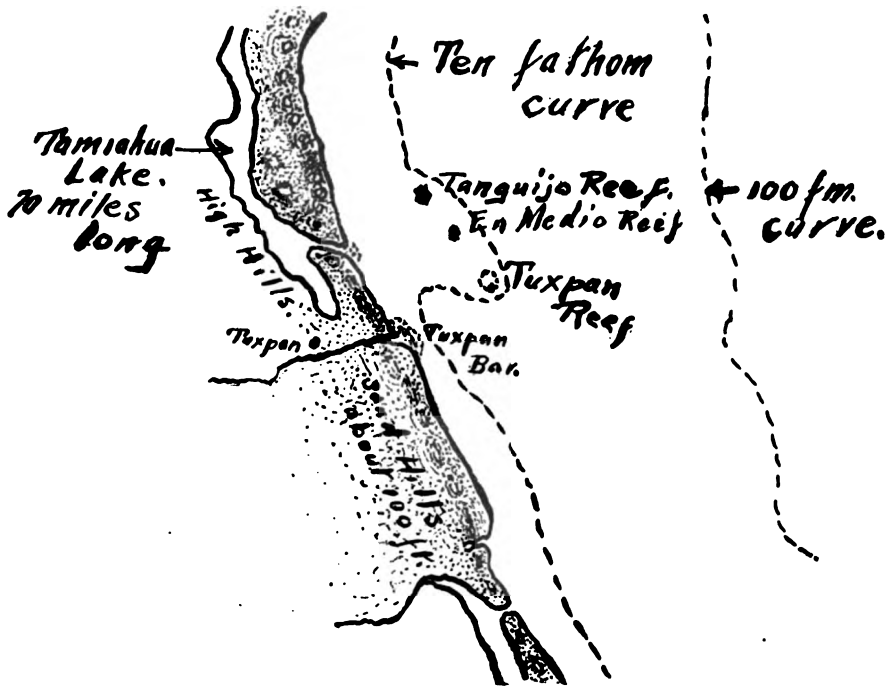

THE REEF WHERE THE BARRACUDA LAY

was devoted to fishing En Medio Reef. As on Tuxpan, the spoon would hardly touch the water when it would be seized. On this day I saw a thirty-five-pounder make a jump that would put most tarpon to shame. His vertical leap was variously estimated at twelve to fifteen feet. It literally leaped itself to death. For gameness the barracuda stands in the front rank. The old fish are tricky and cunning, hard to lure, and full of fight when hooked.

Hamilton M. Laing is an industrious photographer of wild life. He has written of his experience in taking pictures of wild geese in Western Canada. SPYING ON THE TRIBE OF WAWA is the title. In the April OUTING

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WHAT HAPPENS WHEN YOU'RE LOST

By WARWICK STEVENS CARPENTER

ILLUSTRATED WITH DIAGRAM

In Which Are Considered the Real Nature of the Sense of Direction and Why It Comes and Goes

BARTY Josselin *felt* the north. It was no arbitrary point in all the three hundred and sixty degrees radiating about him, but a vital, pulsating, physical reality which no intellectual conception could ever have upset.

"But what *do* you feel when you feel the north, Barty—a kind of tingling?" I asked.

"Oh—I feel where it is—as if I'd got a mariner's compass trembling inside my stomach—and as if I wasn't afraid of anybody or anything in the world—as if I could go and have my head chopped off and not care a fig."

"Ah, well—I can't make it out—I give it up," I exclaimed.

"So do I," exclaims Barty.

"But tell me, Barty," I whispered, "*have* you—have you really got a—a—special friend above?"

"Ask no questions and you'll get no lies," said Barty.

That was before Barty knew that a Martian emigrant inhabited his perfect physique and made him aware, because of his wonderfully organized nervous system, of the north magnetic currents, just as all Martians are. But the Martian abode in Barty was not constant. She was a curious little soul, going about from body to body, and even into animals, sensing all the earth through their organisms, though unable to make any save Barty know of her presence by feeling the north. In her absence Barty was "depayse," as he called it—"desoriente"—"perdu," until it pleased her Martianship to return to such a wonderful system as requires the pen of a Du Maurier for verisimilitude. It is a delightful conception for fiction, that of actually feeling the north, and it is too bad that Du Maurier used it only as an indication of the Martian presence, her purpose being quite other than to guide Barty through all the labyrinthine windings of a savage and unknown country.

But absorbing and inexplicable as sense of direction is in imaginative writing, it is a thousand times more interesting and vital in the stranger world of fact. It is indeed mysterious, for it works largely under cover. One may travel confidently through unmarked woods, conscious at every step of the relation of all parts of the world to himself. Then suddenly, like the shutting down of a curtain, every idea of direction vanishes. He is in a state of complete disorientation.

At another time he conceives that everything has been turned about. This misorientation usually takes the form of a complete reversal of one hundred and eighty degrees, though occasionally it is ninety. Recovery from either state may be slow or precipitous. Every woodsman knows of these experiences, as well as the liability to err from a straight course and to travel in a circle. They are subjects of discussion around every campfire, and have been variously accounted for.

It has been absurdly said, for instance, that one travels in a circle because one leg is shorter than the other, causing him to swing to the side of the shorter

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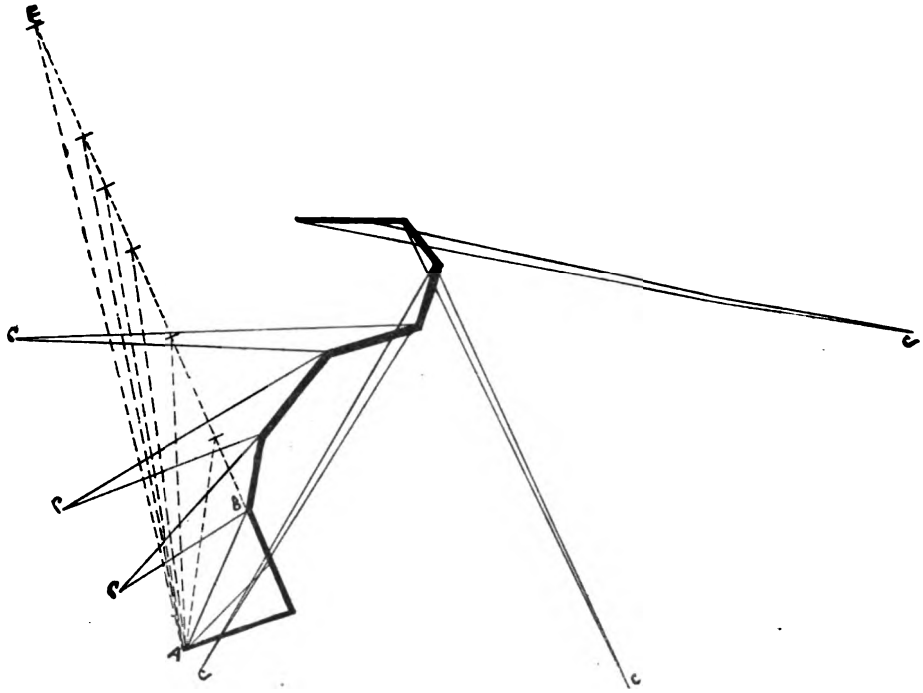

This diagram represents the errors of one who does not attend to the angular relations between different sections of his route. Starting at A, he notices the first sharp turn to the left on the heavy line, but is oblivious to the others. Thus while he believes he is traveling along the straight dotted line BE, he is in reality following the heavy line. The various points, C, indicate where he believes camp A to be. The heavy line is of the same length as the dotted one, but crooked, and only one type of error is here shown.

member. In normal individuals there is no appreciable variation in the lengths of the legs, according to Flint, the physiologist, and Sayre in a thousand measurements found an average difference of but one sixty-fourth of an inch. For light on the phenomena of direction we should turn rather to the brain and its connections, the clearing-house and motor-center for all bodily activity. But this means psychology, a terrible thing to link with woodcraft.

Sense of airection concerns itself with extended space. But just as it is unnecessary for the motorists to have a complete grounding in the intricacies of mechanics, electrical engineering, and higher mathematics, so is it profitless here to go into a long discussion of the perception of space, one of the most technical and involved subjects in all psychology. We are satisfied, despite some philosophical skeptics and notwithstanding some psychological difference of opinion as to how the space is perceived and organized in our minds, that we *do* live in a world of space, and that it is an *ordered* world.

This ordered space, to follow the analysis of Professor James, includes position, lines, distances, directions, figures, and magnitudes, and these five things all enter into our consciousness as sensations, requiring no complicated process of reasoning for their apprehension. "Take figure: a square, a circle, and a triangle appear in first instance to the eye simply as three different kinds of impressions, each so peculiar that we should recognize it if it were to return . . So of lines; if we can notice lines at all in our field of vision, it is inconceivable that a vertical one should not be recognized as affecting us similarly when presented again, although we might not yet know the name 'vertical,' or any of its connota-

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tions, beyond this peculiar affection of our sensibility. So of angles: an obtuse one affects our feeling immediately in a different way from an acute one. Distance apart, too, is a simple sensation—the sensation of a line joining the distant points; lengthen the line, you alter the feeling, and with it the distance felt. . . .

"When we speak of the relation of *direction* of two *points* toward each other, we mean simply the sensation of the line that joins the two points together. *The line is the relation;* feel it and you feel the relation, see it and you see the relation; nor can you in any conceivable way think the latter except by imagining the former (however vaguely) . . . And the moment you have imagined the line, the relation (of position or direction between two points) stands before you in all its completeness, with nothing further to be done. Just so the relation of direction between two *lines* is identical with the peculiar sensation of shape of the space enclosed between them. This is commonly called an angular relation."* Magnitude is likewise a sensation, and is felt in its purest form when the things to be compared are superimposed one upon the other, either actually or in imagination, so that a portion of the greater sticks out, thus causing the sensation of more.

All space relations are accordingly accounted for as sensations. To single out any one of them, says Professor James, "is partially to introduce order into the vastness. To subdivide the vastness into a multitude of these things is to apprehend it in a completely orderly way. . . . These relation sensations may actually be produced as such, as when a geometer draws new lines across a figure with his pencil to demonstrate the relations of its parts, or they may be ideal representations of lines, not really drawn. The bringing of subdivisions to consciousness constitutes, then, the entire process by which we pass from our first vague feeling of a total vastness to a cognition of the vastness in detail. *The more numerous the subdivisions are, the more elaborate and perfect the cognition becomes.*

Since sense of direction is fundamentally sensational, it is clear that it is a native endowment of all normal individuals. It is equally evident, however, that it is a sense as capable of special development as are other senses. The sense of hearing, native in all normal persons, is wonderfully refined in the musician by attention to musical tones and discrimination between them. It is the same with the color sense of the artist, he can tell red from blue; not all of us can see the yellow and blue in a green.

It is so with sense of direction. By attention and discrimination we multiply the subdivisions of our external space, and sensation apprises us of our relations to them. One following a crooked trail, or taking a tortuous way through the woods, who does not attend to the windings of his path, naturally fails to discriminate between important subdivisions, misses vital angular relations between the different sections of his route, and, since the relation between himself and his unseen point of orientation is an imaginary line, is thrown hopelessly off. If we suppose his judgment of distance traveled to be good, his various ideas of the direction of his starting point would be about as shown in the diagram. I believe that most experienced woodsmen will know of cases which it does not exaggerate.

Part the Human Mechanism Plays

But this brings us to the question of the machinery by which we sense progressive movement in a straight line, deviations, and distance traveled. Most of this mechanism we are entirely unconscious of, until it is pointed out, and some of it is of comparatively recent discovery. Obviously the eyes inform us of much of our movement, though to tell how would necessitate more technical exposition. The joints also contribute much of this data. If the surface and muscle nerves of the leg be anesthetized and the leg be artificially rotated, the joints will be sensitive to a movement of *less than one degree.* But if the joints be anesthetized alone, no such informa-

*The italics throughout quotations are for the most part mine.—W. S. C.

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tion will be gained from the muscles, except with very great movement.

Through the semi-circular canals of the middle ear we are also made aware of movements of the body as a whole. The semi-circular canals are also the seat of bodily equilibrium.

C. Lloyd Morgan, in his "Introduction to Comparative Psychology," says that "the exact nature of the physiological impulses which conspire to give rise to these sensations is not thoroughly understood. No doubt the impulses originate in movements of the fluids which fill and surround the membranous labyrinth with its semi-circular canals. If a man sit blindfolded on a smoothly running turntable, he feels a curious sensation of being turned when the table is rotated. If he sit on a swing, blindfolded, and the swing be gently moved, he is at once aware of the fact. If he be on a smoothly running car, he feels each change of rate of motion." Morgan's further comment on the sense of direction of movement through space is illuminating.

"Both in the delicacy of their sensory endowment and in the ability to deal with their environment by sense experience, animals are probably in some respects distinctly in advance of man. Witness the delicacy of sense of smell in some animals, enabling them to do that which no man could do so well. I think it not at all improbable that their powers of rapid flight in the free medium of the air have induced in birds a delicacy and high specialization of the sense of direction of the movements of the body as a whole, *of which we slow treaders of the ground can scarcely form any conception.* And this, perhaps, is a factor in that most difficult and complex question—one that involves a good deal more than instinct only—I mean the migration of birds.

"Very possibly our own endowment in this sense of direction of movement is very degenerate; still more probably we civilized folk do not make much use of the sensory endowment that we have, relying rather on our *knowledge,* through spatial perceptions and conceptions, than on our native powers of sense-experience. Savages, who in their daily life make more use of these native powers, and explorers who are led by circumstance to cultivate the powers, have a sense of direction that the city clerk has allowed to lie dormant and unused. He does not cultivate the delicate use of his membranous labyrinth, with its semi-circular canals. Animals do cultivate the use of this organ, and probably elements contributed thereby enter into the organized and correlated field of sense experience in a way at which we can but dimly guess."

In its completeness, then, *sense of direction is the perception both of spatial subdivisions and their relations to each other and of the direction and extent of individual motion through them.* It can be highly cultivated by attention and discrimination. Memory is a close ally, not only in retracing one's steps, but also in keeping freshly in mind the space covered and so reinforcing the succeeding judgments of direction. Habit plays its part, making the complicated processes both easy and unconscious. New subdivisions are attended to and discriminated by habit so rapidly and *inattentively* —to drop into paradox—that no memory of the attention and discrimination remains, only the result, the new relation of the individual to his point of orientation, being fixed. This is the mysterious working under cover of the sense of direction.

No Heaven-sent Gift

Woodsmen who lack introspection can't explain it. They just know the direction, and that is all. Suspicion: the Martian emigrant. But the novice has no such easy time of it. He must concentrate upon his problem painstakingly. Many of those who believe that the sense is a heaven bestowed gift upon the favored races of woodsmen and Indians never do concentrate, and so never learn of their own latent adaptability. The only way in which it is a heaven-bestowed gift is that some are given better brains than others, brains capable of more attention, of more readily receiving and holding impressions, of more completely discriminating and classifying all the data of experience, and more capable of ideally reconstructing, through

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their imagination, unseen outstanding space with its complicated subdivisions. Our whole progress through space is movement through *seen or sensed* subdivisions to those *unseen but imagined.*

Inasmuch as sense of direction is dependent upon attention and discrimination and memory, it should not be difficult to account for some of its vagaries and for its sudden vanishing upon occasion. It will usually be found to vanish "upon occasion," as when some event takes the mind off the course for a time. You very suddenly realize that you have lost the thread. A gap has intervened since you last knew where you were, which you have traversed without either conscious or unconscious attention. Usually quiet though will bridge the interval.

Outside the Realm of Reason

At other times sense of direction drops out of the mind without rhyme or reason, almost between seconds. Attention and memory seem to become wearied. It seems like mere forgetting. Names escape us and come back with tantalizing frequency. How much more easy for the imaginary chart of our unseen surroundings to drop down from its labored suspension on the surface of consciousness. You rest for a time and smoke, and trouble your mind not too excitedly about the wanderer, until, as Emerson has said of strayed ideas, it saunters back "as innocently as if it had never been sent for."

In dealing with the data of space the mind manifests the same weaknesses and uncertainties as in other fields. In this connection there is a psychological fact which need only be stated here, that "in spontaneous revery some one item appeals most to our interest. Some one brain process is prepotent above its concomitants in arousing action elsewhere." If fear creeps in at such times, with its absorbing and compelling concepts, it may occupy the field completely, against any return of sense of direction, and drive on even to destruction.

Then there are the illusions of orientation. Binet, the French psychologist, tells of a man who crossed a street without noticing it and then turned absentmindedly back. When he reached it again the right hand objects were on the left. Thus his expected points of reference were in contradiction with his ideas of where they should be. Nevertheless he accepted them as they were. The false system persisted, even though he knew it to be false, just as an illusion persists.

Binet himself invariably lost his sense of direction in the Louvre, where most of the rooms are lighted from above or from an inner court. Upon looking out at the Seine he found it always flowing from left to right, instead of from right to left. He knew that it should flow from right to left, but the illusion persisted.

Illusions of orientation sometimes disappear suddenly, and again yield only to most careful analysis of the situation. They can be led up to by conscious or unconscious judgments and are generally equivalent to a rotation of one hundred and eighty degrees, though occasionally they are ninety, according to Binet. It would seem, rather, that other variations exist, though usually they are assimilated to cardinal points. Small illusions of a few points persist for a moment, and then give way to the evidence. The radical and direct contradictions are the ones that hold on.

This misorientation will frequently occur on coming to streams in thick woods and in heavy storms. The streams seem to flow in the wrong direction, and one feels that he is on the wrong side of them, though he knows that he has not crossed them. One of my friends becomes thus turned around every time he meets a certain stream at a certain point. He knows the place perfectly now, goes squarely in the wrong direction, as it seems, and in a few minutes the illusion vanishes. This he has done twelve to fifteen times, though every foot of the surrounding woods are home territory. The explanation is in a peculiarity of topography, which brings on the illusion of a complete reversal.

How common is that illusion of orientation which says that the compass has gone wrong! Yet in whatever may be left of our sober sense we know that it

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is a "landmark" as certain in most localities as the eternal hills themselves. Still the idea that it is wrong remains, until it requires a real effort to go contrary to the illusion and follow the needle.

In complete disorientation, when one meets a known landmark he accepts it without question and reorientates himself accordingly—unless he has already gone mad. In misorientation the reference points contradict his own scheme, even though the scheme be held but half consciously. He may accept the landmarks, or neglect them utterly and hold to the illusion, even to the extent of crossing the brook which he has not crossed before, setting up his own feeling against that of the compass, or doing something else equally foolish. Surely sense of direction does rest upon a clear mind and level-headedness!

But how shall traveling in a circle be explained? Not all lost persons do it. Some are erratic, bending first one way and then another, or even going tolerably straight. Obviously, in undirected or misdirected wandering one will very frequently cross the back trail by mere chance. Bona fide traveling in a circle is different. In the woods or rough country a hundred and one obstacles cause one to turn to one side or the other. Without conscious attention one chooses habitually the same side, and if he does not take long forward and back sights, he fails to make complete half circles about the obstacles. Thus every obstacle throws him farther on the same side, each new course being a new chord in the circle, until he is back again on his original tracks.

Without conscious guidance we tend to do the same kind of thing over again in the same way. Certainly this statement is good psychology, and it *may* account for traveling in a circle in daylight under suitable conditions. At other times hills and valleys with their confusing and changing slopes may change the course of a distracted person as easily as the banks of a stream its mobile current, and thus throw him round and round. But there remain the times of dark night or of blinding storm, in level country, when one travels in circles as on a floor. Perhaps the uncultivated organs of the middle ear, the semi-circular canals, have a stronger tendency one way than another, comparable to right- and left-handedness. At any rate no one has explained it, though the realm of psychology holds the still uncertain answer.

It is one of the most important functions of the mind, this sense of direction. Our very existence is conditioned upon it, and nearly every act of our lives is performed under its guidance. Its cultivation is correspondingly important, though civilization has tended to decrease the necessity for its refinement. But for the outdoor man it is as vital as in the earliest days of savagery. Small wonder that its temporary eclipse or derangement, either in the woods or in the ordered precincts of the Louvre, fills one with uneasiness and fear. Who has not awakened criss-cross of his own home bed in the night and felt that creeping terror? You know that you are in bed, to be sure—but where in bed?

It is easy to appreciate the elation of Barty when the Martian returned.

"Enfin! ça y est! quelle chance!" he exclaimed.

"Quoi, quoi, quoi," said I, quacking like a duck.

"Le nord—c'est revenu—it's just ahead of us—a little to the left."

HOW TO MAKE A TACKLE BOX is described by William B. Cairns in the April OUTING. With full diagrams

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FACTS ABOUT RIFLE RECOIL

By CHARLES NEWTON

The Varying Effects Obtained from Different Cartridges with Black and with Smokeless Powder

THE difference in the recoil of rifles when using black and smokeless powders has long been the subject of speculation, inquiry, and explanation. The explanations have been numerous and exhaustive, but seldom satisfactory, owing to their failure sometimes to check up correctly with observed phenomena, thus throwing doubt upon their accuracy. Most of the different reasons given are correct as far as they go, but the principal source of error seems to lie in the fact that this variation in recoil is usually attributed to some one cause, whereas it is usually the result of the action of a number of different causes, different ones of which preponderate in different cartridges and rifles; hence with different results—differing as to quantity but not as to general effect. Without making any claim to special revelation, or to complete knowledge of the subject, it is our purpose to point out and discuss some of these causes.

The principal cause of this reduction in recoil when smokeless powders are used is the fact that black powder ignites and burns far more quickly than the smokeless, hence it starts the bullet with more of a jar, although the smokeless, burning progressively, ultimately develops the greater velocity.

Again, the greater the weight of the projectile the greater the recoil developed in obtaining a given energy. Consulting the ballistic tables furnished by the Winchester company (from which all figures given herein are taken) we examine, as an illustration, the different loadings for the .45-70 shell and we find that with the 330-grain bullet and black powder we have an energy of 1,395 foot-pounds with a recoil of 12.7 foot-pounds. With the 500-grain bullet we have an energy of 1,602 foot-pounds and a recoil of 18.43 foot-pounds. In short, due to the longer, heavier bullet, we have increased the energy but fifteen per cent while increasing the recoil forty-five per cent. Hence we find that adding to projectile weight adds to recoil.

Considering now the conditions when the charge of powder is burning and driving the bullet down the barrel, we find that with smokeless powder the charge is ignited practically simultaneously throughout the shell, the primer flame reaching and setting fire to each individual kernel, which then burns from the outside toward the center until consumed or until the bullet leaves the muzzle. With black powder only that portion lying next the flash-hole of the shell is ignited by the primer flame, and this burns and in turn ignites the adjoining kernels; hence the charge burns from rear to front.

This is easily proved by firing lead bullets, some loaded with black, and others with smokeless powder. Those fired with black powder will have the base scarred where the kernels of powder at the front of the charge have been driven against it, while those fired by smokeless powder will remain smooth. Applying this proposition, we find that so much of the powder as is unburned is forced along with the projectile until the burning process reaches it from the rear, and it practically adds its weight to that of the bullet until it is burned. Applying this to the .45-70-500 cartridge, we find that at the time 20 grains of the powder have been burned the bullet is on its way, also 50 grains of unburned powder behind it, a total projectile

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weight of 550 grains, so far as the development of recoil is concerned.

With smokeless powder each individual kernel is ignited from the primer flash, each begins to burn at once and is surrounded by the hot gases developed by its burning, hence is in contact with no other kernel. The whole burning charge is thus strung out throughout the length of the rapidly extending chamber back of the bullet, and the projectile weight is never over the 500 grain point. Comparing the recoil of the 45-70 shell with 350 and 405 grain bullets, we find this additional 55 grains has increased the recoil 1.67 foot-pounds. Here, however, is but a part of the difference.

Black Powder Burns Faster

An important element is in the greater quickness with which the black powder burns. Make two piles of powder, one black and the other smokeless, and of the same size. Touch a match to the black and there follows a flash and it is all over—so far as the powder is concerned. Ignite the smokeless and it burns at about the rate of celluloid, a pound requiring several seconds, varying according to composition and granulation. Now, using it to load our same .45-70, we examine its action.

As is well understood, the greater the pressure under which smokeless powder is burned the faster it will burn. Used in a shell, the greater the resistance with which it meets, the greater the pressure developed and the faster it burns. Likewise the heavier the bullet used the greater the resistance and consequent faster burning. Applying this we find that with the .45-70-330 bullet we have, with smokeless powder, 10.28 foot-pounds recoil; with the 500 grain bullet, 15.22 foot pounds, an increase of approximately fifty per cent. With black powder the 330 grain bullet gives 14.57 foot-pounds, and the 500 grain 18.43 foot-pounds, an increase of less than twenty-eight per cent. This difference in the percentage of increase of recoil by use of the heavier bullet is due to the faster burning of the smokeless powder when subjected to the greater resistance of the heavier bullet.

To further illustrate this principle we will turn to the cartridges using smokeless powder at higher pressures and consequent faster rate of burning, since all the smokeless powder loads above mentioned have been black powder shells and bullets loaded with smokeless powder and giving their original black powder pressures and velocities. Parenthetically, we might say here that none of these smokeless loads burns the powder at a proper rate of speed or under a proper pressure to consume it cleanly, and this statement applies, although in a less degree, to the .30-30 class of so-called "high power" cartridges. With the true high power ammunition the powder is burned at much higher pressures and therefore under proper conditions to develop its strength.

Comparing a true high power load with the black powder, we will select the .405 Winchester for comparison with the black powder .45-70-500. We find that the .405 has an energy of 3,236 foot-pounds, and a recoil of 28.24 foot-pounds. The .45-70-500 has an energy of 1,602 foot-pounds and a recoil of 18.43 foot-pounds. The energy of the former is double that of the latter, and its recoil fifty-three per cent greater. This is not in proportion to the energy developed, but in the light of the difference in area of cross section of bore, hereinafter discussed, goes far to prove that, with the smokeless powder properly consumed, the variation in recoil in cartridges of similar construction would be far less than we at present experience. Hence a large portion of our present difference in recoil between the two powders is attributable to the abnormally slow burning of the smokeless type as actually used.

In the above we have considered principally the black powder shells and bullets when loaded with smokeless powder and for the normal black powder pressures and velocities. Another feature presents itself when we compare the high power smokeless type with black powder cartridges of similar energy. Here we have the interposition of another and very important factor of area of cross section of bore.

A considerable portion of the recoil of a rifle is developed while the bullet is

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still in the bore, due to the reaction as the two solids, rifle and bullet, are being thrown apart by the pressure of the gases, more of it is due to the rapid expulsion of the air from the barrel in front of the bullet, but by far the larger portion is due to reaction from the impact of the escaping gases upon the atmosphere and upon the base of the bullet after it has cleared the muzzle. It is with that portion of the recoil due to the expulsion of the air from the barrel ahead of the bullet and with that due to the impact of the escaping gases that the area of cross-section of the bore becomes material. The difference in reaction due to removing a large or small quantity of air from the bore is obvious, but that due to the impact of the escaping gases merits consideration.

The barrel of the rifle may be likened to the cylinder of an engine, and the atmosphere and bullet base to the piston head. Given gas at a certain pressure, the power developed is directly proportional to the area of cross section, which, again, is proportional to the squares of the respective diameters. A rifle bore of a diameter of .30 inches would, therefore, develop power, as compared with one of a diameter of .45 inches as its square, 900, is to the square of the other, or 2,025, assuming the gas pressure the same. Hence, since action and reaction are equal, the recoil of the .45 caliber would, so far as impact is concerned, be over double that of the .30 caliber. However, it is well known that the high power rifle usually releases its gases at a higher tension than does the lower power, hence we have our rule modified somewhat.

In the absence of actual measurements, the effects of these individual conditions cannot be exactly stated, but we may nevertheless examine the conditions themselves. As above stated, the difference in reaction due to the difference in cross-section of bore is modified by the higher tension of the gases from the smaller bore. How much we cannot state. This is, in turn, modified by the fact that these gases are not cleaving their own way through the outside air, but are partly following in the wake of a flying bullet, which acts as pacemaker, thus clearing the way for them. Also they will penetrate with less resistance, on the same principle that a given amount of lead will penetrate more deeply, at a given striking volocity, if in the form of a long bullet of small diameter than of a short bullet of large diameter. There is the same energy to do the work and less work to be done.

Another modifying fact is in the velocity of the smaller caliber bullet being greater than that of the larger, giving a more rapid expulsion of the air from the barrel by the bullet, and consequent greater energy devoted to producing a vortex, or "hole in the air," in front of the muzzle when the bullet appears. These are but some of the problems connected with the influence of cross-section of bore upon recoil. We have not, as above suggested, measured or determined them, but we may nevertheless observe their effects.

The .35 *vs. the* .405

The easiest comparison is between the .35 Winchester and the .405. The former has an energy of 2,687 foot-pounds, and the latter 3,236 foot-pounds. The recoil of the .35 is 19.81 foot-pounds and of the .405 28.24 foot-pounds. In other words, the .405 has twenty per cent greater energy and forty-three per cent greater recoil. The respective areas of cross section are to each other as 1,640 to 1,225, or the .405 is about thirty-four per cent greater. One of the writer's experimental rifles is of .25 caliber, yet develops, with a 117 grain bullet, 50 foot-pounds more energy than the U. S. Springfield model 1906. The recoil has not been measured as yet, but is apparently about two-thirds that of the Springfield.

The Adolph Express .30 caliber has 150 foot-pounds more energy than the .405 Winchester, yet its recoil, although not yet measured, seems less than the Winchester .35, which is less than 20 foot-pounds. The Ross .280 cartridge apparently gives decidedly less recoil than the .35 Winchester, although it has decidedly more energy. The writer has developed a considerable number of cartridges of small calibers and high veloc-

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ity, and has uniformly found that the smaller the caliber the less recoil in proportion to energy developed.

Another element entering into the question of recoil of a rifle is the weight of the arm. Were the weights of the different rifles exactly proportional to their energy we might disregard this, but in view of the fact that the weights of the weapons are comparatively uniform while the energies vary widely, it must be considered when reasoning from cause to effect. A .32-20 repeater weighs practically as much as a .30-30 or a 7mm. Mauser.

The true recoil, to be used as a basis for accurate deductions is that of the cartridge, not that of the rifle. The recoil of the rifle is that of the cartridge, less that absorbed by the inertia of the weapon in which it is fired. As illustrating this we have the .32-40 credited with a recoil of 3.08 foot-pounds for nitro powder and 4.13 foot-pounds for black, an increase of thirty-four per cent. With the .38-72 we have 8.7 foot-pounds for nitro and 9.4 for black, an increase of but eight per cent. The explanation of a part of this variance in results is the fact that the rifles weighed nearly the same, hence from the recoil of the smaller cartridge nearly as much actual energy was absorbed by the rifle as was taken from that of the larger.

With two bank accounts of $100 and $1,000 respectively, draw $50 from each. In one case you have but fifty per cent left, in the other case ninety-five per cent. Another contributing cause is the fact that the longer, heavier bullet of the .38-72 caused the powder to burn more quickly, and thus, as above stated, increase the recoil.

From which it may be seen that the actual reasons why cartridges loaded with smokeless powder recoil less than with black are many, and their combinations a multitude.

The Weeks-McLean Bill Not long ago we referred to the opinion offered by Attorney-General Carmody, of New York, in regard to the constitutionality of the Weeks-McLean Bill. Apparently there is some misunderstanding as to the scope of that opinion. A letter from Kansas City asks if it is true that the bill is unconstitutional and if it is, therefore, safe and lawful to do spring shooting in that part of the country. The answer to both questions is, of course, a large NO. Mr. Carmody is chief counsel for the State of New York and cannot pass on the constitutionality of any Federal law. That function belongs exclusively to the Federal courts. Mr. Carmody's opinion is merely his opinion, interesting, but a long way from being final. Such legislation as this enters a new field and one probably not contemplated in the original definitions of interstate traffic. In the final adjudication, however, the courts will doubtless consider not only that original intention, but also the broader and more vital question of public policy. It is on the latter basis that most laws stand or fall when they do not specifically contravene the conditions laid down in the constitution.

No Spring Shooting Our Kansas City friend brings up another point that has appeared before; that is, the right of the State to issue licenses

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for shooting in a season declared closed by the Federal law. For example, the State of Missouri permits spring shooting; the Federal law prohibits it in the case of migratory game birds. Here is the State permitting that which the Federal Government prohibits. What shall the sportsman do? The answer is simple. Assuming the constitutionality of the Federal statute, as we must until final declaration is made to the contrary by the Supreme Court, that statute is the law of the land and must be obeyed. In other words, gentlemen, you must abstain from spring shooting if you are law-abiding citizens, no matter what the laws of your State may be on the subject.

Who Enforces It? Still another point of doubt is as to the steps to be taken for the enforcement of the new law. That is in the hands of the Department of Agriculture. That department has the power to appoint special Federal game wardens, or to act through the State wardens, or both. As a matter of fact, the State wardens are probably bound to enforce the Federal law, even without special instructions from Washington to that effect. Certainly an efficient warden would so assume. Assuming again the constitutionality of the statute, the crux of the whole situation lies in that point of enforcement. An inoperative law is bad, no matter how good the intent of its framers. But every law rests finally on the spirit and desire of the citizens. There is a broad general agreement that spring shooting is undesirable. Good sportsmen are opposed to it. Therefore why haggle over the exact phrasing of the law? Cut out the spring shooting and abide by the purpose of the Weeks-McLean Bill and use your influence to the end that others may do the same. Then we shall have a government of enlightened public opinion, which is far more to be desired than one of rigidly enforced, strictly construed law.

Game and the Parcel Post In line with the general policy of a closer restriction of illegal shooting is the order of the Post-Office Department, denying the use of the parcel post for the shipment of game from one State to another when illegally killed. This has been prohibited since 1900, and the express companies have co-operated in the enforcement of the Lacey Act, passed in that year. The introduction of the parcel post brought new complications. The local postmasters declared that they had no right to permit examination of mail for the purpose of discovering violations or to question the character of the articles offered for mailing provided they came within the specific limitations of the act. Now a special order has been issued empowering postmasters to refuse for mailing game killed in violation of the laws of the State, territory or district in which it is so offered. Game lawfully killed may be shipped by parcel post, but not beyond the second zone.

To Protect the Hunter Game is not the only thing that suffers when the man with the gun takes the field. Men, too, are among the victims. Every open season takes its toll of death or serious injury. Statistics could be quoted, but they matter little. All of us know of numerous cases, and in almost every case the accident could have been easily avoided. "Saw something moving in the bushes and thought it was a deer." "Didn't know there was anyone in range." "Didn't know there was a cartridge in the magazine." "Thought the safety was on." So run the excuses, and not one of them a defense that any man in his senses would employ. The Campfire Club has taken up this problem in earnest and is agitating for the enactment of legislation to protect the companions of careless hunters. Two bills endorsed by the club's committee have been introduced in the New Jersey legislature, and, while we have not all the confidence in the world in the possibility of eradicating fools by act of legislature, we are glad to quote the material parts of these two acts. The agitation will do good at least, whatever may be the fate of the bills. Section 1 of the first bill reads:

"1. That no license shall be granted to any non-resident or to any unnaturalized, foreign-born resident or to any citi-

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zen of this State to hunt, pursue or kill any game fowl with gun or other firearm, unless the said applicant, in addition to the existing requirements, shall take and subscribe an oath before the officer granting such license or before any other person authorized to take oath in this State, 'That the said applicant will not point any gun or other firearm, loaded or unloaded, in the direction of any other person; and, further, that he will not shoot at any object without first ascertaining that said object is not a human being.'"

The second bill, which is a supplement to "An Act for the Punishment of Crimes," reads as follows in the material sections:

"1. Any person who shall intentionally point any gun, pistol or other firearm at any person or persons, which gun, pistol or other firearm shall be unintentionally or accidentally discharged, thereby injuring any person or persons, shall be guilty of a misdemeanor; provided this shall not apply to any officer in the discharge of his duty, or to any person acting in self-defense.

"2. Any person, who, while hunting, shall discharge any gun, pistol or other firearm in the direction of any object without first ascertaining whether such object is a human being, whereby any person is injured, shall be guilty of a misdemeanor."

No Aliens Need Apply

Pennsylvania has been upheld by the Supreme Court in her effort to prevent aliens from hunting or possessing shotguns or rifles. There was strong opposition to the bill, and other States have watched the progress of the litigation with interest. It is a little difficult, however, to see what basis there could have been for the opposition, other than the general one that it was class legislation, making a distinction between citizens and aliens in their position before the law. If that theory could be upheld, then a great deal of legislation now on the statute-books would be thrown out. Practically every State makes a distinction between residents and non-residents in the amount of the license fee charged. In other fields of legislation special bars are erected against the alien, as in the matter of transmission of real property by bequest, for example. The immigrant with his gun is a problem. Barred from the pleasures of sport in his own country in many instances, America is merely another way of spelling unlimited opportunity. In some cases, as in Italy, the shooting of song birds has been almost a national pastime for many years. Parts of the peninsula are as a result stripped practically bare of songsters of the feathered variety. When the annual migration from Africa is on thousands of birds are shot along the Mediterranean littoral, when the birds are wearied with their long flight and consequently slow on the wing. It is to prevent such a desolation in this country that Pennsylvania has taken her radical step. Now let other States follow suit.

Why this Indifference?

The University of California is reported to be discussing the advisability of prohibiting all intercollegiate competitions in every form of athletics for a period of two years. The reason alleged is that support of the teams has narrowed down to a comparatively few men in the institution, the rest of the student body being practically indifferent to the contests. It is claimed that many of the men in the institution hardly know the members of the varsity organizations by sight, and the support of the games is lessening year by year. Therefore, the university authorities argue, it is necessary to take such steps as are calculated to bring the members of the various classes into closer touch and acquaintance with each other. This can best be done by a system of intra-mural athletics, free from the distracting influence of intercollegiate competition. So much for the report, which we offer, as the lawyers say, on information and belief. But why this sad condition? In this month's issue of OUTING we publish an article on "Why California Likes Rugby." The author is entirely friendly to the rugby game as against the intercollegiate. But may there not be a fly in the ointment? In every Eastern institution and most of the Western football is the heart of college athletics, not

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only financially, but in the matter of student and graduate interest. Can it be that the lack of this game at California has induced a general athletic decline? We do not know. We merely make the suggestion for what it may be worth.

Strong Tennis Team The Australasian tennis team for the attack on the Davis Cup has been selected and it is a threatening combination. Brookes, Wilding, Dunlop and Doust are the men and the team that beats them will do a bit of playing. The first three are admittedly the top men in the Antipodes, and Brookes and Wilding are not far from being the strongest players at present to be found anywhere. The former is possibly a little past his best form and may feel the strain of a five-set match under unaccustomed conditions, but there are few points in the strategy of the game that he does not know. Wilding made the best showing of any player last year, beating McLoughlin in the finals of the All-England by over-matching the Californian at his own game. This will be the sixth time that Brookes has figured in Davis Cup competition, and the fourth for Wilding. Dunlop has figured in two, pairing with Brookes in 1911 to beat Beals Wright and McLoughlin, and again in 1912, when the cup was lost to England. In the matter of consistently successful experience over a long period we have no players in this country to compare with this combination, and if they are on their game our work will be cut out for us.

Amateurs in Tennis Tennis players are agitated at present over the definition of an amateur. Unfortunately the discussion and the proposed rules seem to center around the conditions under which contestants reach the place where the tournaments are held and the manner in which they keep soul and body together while there. With all respect to the men in charge, we submit that this is breaking a butterfly on the wheel, so far as the real question of amateurism is concerned. A man may have his expenses to, at and from a tournament paid by any man or organization he pleases and yet remain an amateur in every proper sense of the term. That is to say, he is receiving no money, support or assistance for his own profit directly or indirectly as a result of his skill as a tennis player. On the other hand, we can easily imagine a case in which another man is paying all his tournament expenses out of his own pocket with the most scrupulous care in the world, and yet be practically maintaining himself because of his tennis fame. That man is not an amateur, no matter what the rules say.

And Summer Baseball Speaking of amateurs, the old specter of summer baseball still rears its head in the college world. The National Collegiate Athletic Association gave much time to the discussion in its last annual meeting in New York without arriving at anything resembling a decision. Now comes the Yale *News* with a collection of opinions from college captains. Here is the opinion of Captain Blossom, of Yale:

"A great many men playing college ball really need the amount that they can earn by playing during the summer to help pay their educational expenses. It seems unfair to prevent these very often talented players from putting their abilities to use during the summer baseball season."

Unfair to whom? Amateur sport is not maintained primarily for the benefit of men working their way through college. If they cannot continue in college and remain amateurs the fact is to be regretted, but they have not come to college to play baseball presumably, and if they must choose between college and baseball then they must choose. General rules and conditions cannot be devised that will fit all special cases without hardship or inconvenience. The opinion of Captain Rhoads, of Princeton, is not greatly different from that of Captain Blossom. We quote in part:

"I am heartily in favor of permitting a man to play ball in the summer if he wants to. If a man is trying to get through college and has ability as a ball player, I fail to see any reason why he

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should not turn that ability to good account. I cannot see why a man whose talent runs to baseball should not help himself through college by using that talent just as well as a man whose ability is more scholastic and who earns money by tutoring."

What Is an Amateur? The argument which Captain Rhoads adduces is an old one, but it does not apply. If there were competitions between amateur students of Greek, on the one hand, and between professional teachers on the other, that were of considerable extent and interest, we should very soon discover good reason for excluding a teacher of Greek from competition with the students. There is a direct corollary to this in the amateur musical competitions held in Germany and in Wales and from which men who have sung or played for money are excluded. The reason is obvious. If amateurism is worth while at all, it is worth making it real. In such a field there are no halfway places. You are an amateur or you are not. If you are not, if you have used your athletic ability in whole or in part for your own support or profit, then you have no business in amateur competition, and all the special pleading and word-juggling in the world cannot make you properly eligible. It is argued that men now evade the rule by playing under assumed names and then lying about it when suspicion arises. What if they do? Are the colleges so spineless or so lacking in common sense that they cannot deal with this minor evil? In how many cases is there really serious doubt about the merits of the case where men are suspected of dodging the rule? When a player's amateurism is called in question or suspected, the burden of proof rightly rests on him. If he cannot clear himself, then play without him. A place on the college team is not a vested interest or a sacred right. If the colleges will only act vigorously and with common sense they will soon find that the number of men whose college life depends on playing baseball during the Summer will be materially lessened without perceptible shrinking in the registrar's office. In the University of Minnesota candidates for the teams are required to sign an affidavit as to their amateur standing under penalty of expulsion from the university in case of perjury. This is a drastic method, but effective.

Hand-Reared Athletes A correspondent of the New York *Evening Post* indulges in something of a tirade apropos of American methods, aroused by some criticism in an earlier issue of the *Post* of the failure of the Olympic fund backed by the Duke of Westminster. It is impossible to cover the letter in detail, but there is one point on which we should like to have some light. The *Post's* correspondent, rejoicing over the failure of the Westminster fund, paints this picture of what would happen if the fund had been raised: "The venture would be conducted on the American plan. The men would be regarded as prize-runners now; would be withdrawn from their normal vocations; would be purchased, dieted, trained, coached, nursed, coddled; in short, would cease to exist as useful men, but would be hand-reared for the prime event in much the same way as a turkey is prepared for the Christmas market or a prize heifer for a cattle show." What we want are specifications. Presumably that is what is being done at the present time. Who are the prize turkeys? And who is putting up for them? Perhaps it is being done, but who are the men and what are the conditions, specifically? We yield to no one in our admiration for the sporting spirit of the best English amateur, but we are not content to see American athletes lie under a blanket indictment of this kind. Does the correspondent in question labor under the delusion that a part of the last Olympic fund went for the training and developing of athletes before the games? It would seem so from his reference to withdrawing the men from their normal vocations. Does he know of any case in which this happened? If so he should make it known, for the general belief —even in the minds of the donors—is that that money was devoted entirely to the traveling and living expenses of the athletes from New York to Stockholm

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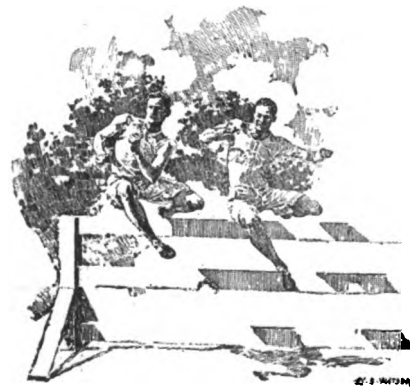
and return. We do not pretend to state that that of which we have no knowledge therefore does not exist. We insist, however, that this vague talk of commercialized athletes is becoming somewhat wearisome and it is time now for a few specifications.

Virginia's Market Law There is a fair chance that Virginia will line up with New York and Pennsylvania in prohibiting the sale of game. In a bill which is being urged for passage by the Virginia Audubon Society it is expressly stipulated that the birds and animals protected by the new law, except rabbits and hares, shall not be offered for sale. It is a pity, however, that the framers of the law should have been somewhat faint-hearted in the final clause of the paragraph prohibiting marketing. Here is the clause: "Provided that nothing in this chapter shall be construed to prevent the sale or shipment within or without this State, for sale, of wild ducks, brant, geese, or swan when legally killed." Why the exception, particularly when the birds excepted are those which are usually the favorite ones in the market? In other respects the proposed legislation seems to be framed on good models.

Virginia's Game Commissioner Another respect in which Virginia lags behind the rest of the Union is in her lack of a State Game Commissioner. A bill has been brought before the State legislature providing for the appointment of such an officer and for the organization of his department in a proper manner. The Virginia Game and Game Fish Protective Association ranks this State *about fourth from the bottom* of the list of forty-eight States in the conservation and preservation of wild life. It is high time for action if the State is to have anything to protect. The association referred to above has been working hard, but private organization can do little without proper official backing, just as official action amounts to little without public support. Virginia is going at the matter in the right way, if they can only make the politicians see the light. Incidentally the department should be self-supporting in view of the number of non-resident hunters.

Wrong Side Up The joke is on us. On page 582 of our February issue we published a rather unusual photograph of reflection, calling attention to the fact that it was difficult to tell top from bottom. In proof whereof the cut appeared in the magazine wrong side up, a piece of evidence that we did not expect or desire. This paragraph is written merely to reassure our friends, several of whom have called our attention to the matter, that we really did know which side was up, but that apparently we did not make our knowledge sufficiently clear to the printer.



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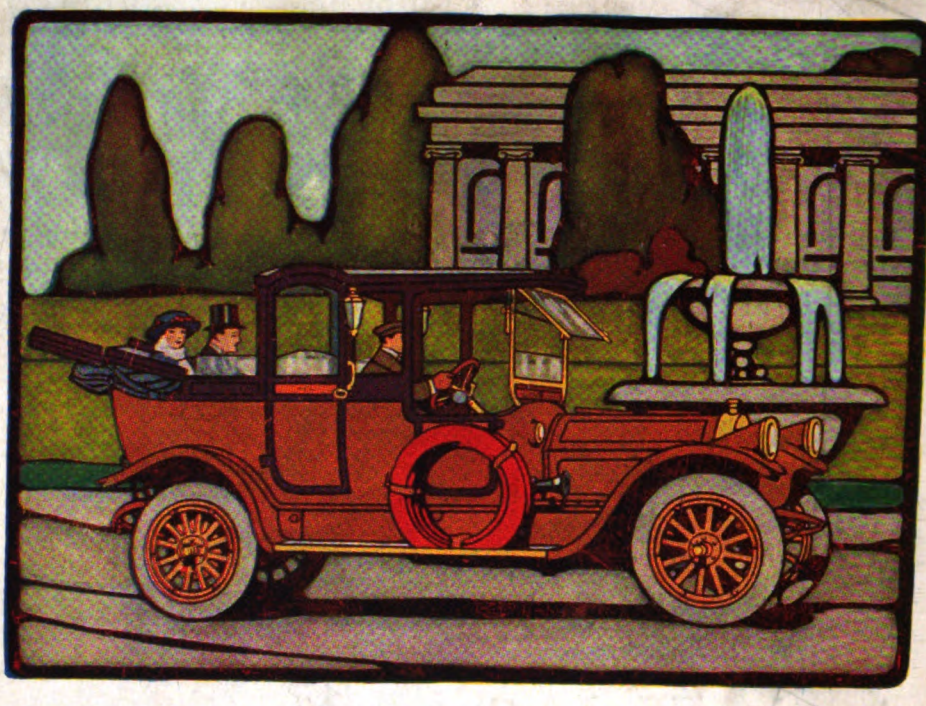

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